NORTH COAST CORRIDOR

TRANSPORTATION AND RESOURCE ENHANCEMENT PROGRAM AND HIGHWAY PUBLIC WORKS PLAN

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Caltrans

SANDAG

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EXECUTIVE SUMMARY

This document is a preliminary Draft Transportation and Resource Enhancement Program and Highway Public Works Plan (TREP/PWP) that has been made available for public review and comment in conjunction with the *I-5 North Coast Corridor (NCC) Project Draft EIR/EIS* (June 2010). As part of the ongoing review process for the I-5 NCC Project, this Draft TREP/PWP will be revised to: 1) reflect selection of a preferred alternative for the proposed I-5 highway and community enhancement improvements, 2) incorporate potential resource restoration and enhancement opportunities and a process for implementing these projects as further assessed and prioritized by the region, and 3) to address comments received on the preliminary draft document. Accordingly, the analysis and conclusions presented within this preliminary Draft TREP/PWP will be refined concurrent with the *I-5 NCC Project Draft EIR/EIS* process. A formal public review and comment period will be completed for the Draft TREP/PWP according to California Coastal Act (Coastal Act) policies and Title 14 of California Code of Regulations governing public works plans and, as applicable, local coastal program (LCP) amendments.

The preliminary Draft TREP/PWP contains the following sections that are further summarized below:

- **Section 1 – Introduction** describing the purpose and intent of the TREP/PWP.
- **Section 2 – Context** providing the policy and physical background information for this document.
- **Section 3 – The Corridor Problem and Vision** identifying the regional transportation system's problems and deficiencies and the proposed vision, goals, and objectives put forth to remedy such.
- **Section 4 – Scope of Planned Improvements** describing the proposed program of improvements along the I-5 highway and LOSSAN rail corridors located within the NCC.
- **Section 5 – Coastal Development Policies and Resources** evaluating the scope of improvements included in the Draft TREP/PWP for consistency with applicable coastal development policies of the California Coastal Act (Coastal Act), and where applicable, Local Coastal Program (LCP) policies for each affected, certified city in the NCC.
- **Section 6 – Implementation** providing the framework for coordinating the timing of rail, highway, and community and resource enhancement improvements to ensure implementation of a multimodal solution for regional transportation needs, and comprehensive restoration and enhancement plans are completed in conjunction with transportation improvements. Coastal Commission procedures for review and authorization of development are also described.

ES.1 INTRODUCTION

The San Diego County coastal area contains some of the most heavily used beaches in California and offers varying coastline experiences enjoyed by the public year-round. Northern San Diego County alone contains 30 miles of coastline and some of the largest remaining coastal wetlands in California which provide exceptional recreational opportunities. The 1999 Coastal Commission Public Access Action Plan reports that 63% of the San Diego County coastal area is accessible to the public, and recognizes roadway congestion as one of the greatest impediments to public access in coastal areas. It specifically notes that, among other things, traffic congestion and poor traffic circulation are significant problems as residents and visitors compete to use the same transportation system. In addition, there

are limited transit and freeway options that provide access to the beach. As a result, developing and maintaining acceptable transportation services and alternative transportation modes is critical for both residents and visitors to ensuring public access to recreational opportunities along the San Diego County coastline. Figure ES-1 depicts the TREP/PWP's regional and corridor-wide context.

ES.1.1 Purpose of Transportation and Resource Enhancement Program and Highway Public Works Plan (TREP/PWP)

The San Diego Association of Governments (SANDAG) and California Department of Transportation (Caltrans) have prepared this NCC TREP/PWP to:

- Create a programmatic approach for implementing rail, highway, transit, bicycle, pedestrian, and community enhancement projects to improve and maintain mobility and access to coastal recreational resources in the NCC;
- Plan for and implement a comprehensive program to protect, restore, and enhance sensitive coastal resources along the NCC and to mitigate potential resource impacts caused by implementation of the transportation improvements;
- Provide a coordinated document to obtain federal consistency certification for the program of transit, highway, and resource enhancement projects in accordance with Chapter 3 of the California Coastal Act; and
- Obtain PWP approval for the highway and associated community enhancement projects included in this plan in accordance with applicable LCPs and Chapter 3 requirements of the California Coastal Act. (Rail projects that improve movement of freight are not subject to coastal development permit or PWP requirements of the California Coastal Act as a result of their status as a common carrier under the Interstate Commerce Commission Termination Act.)

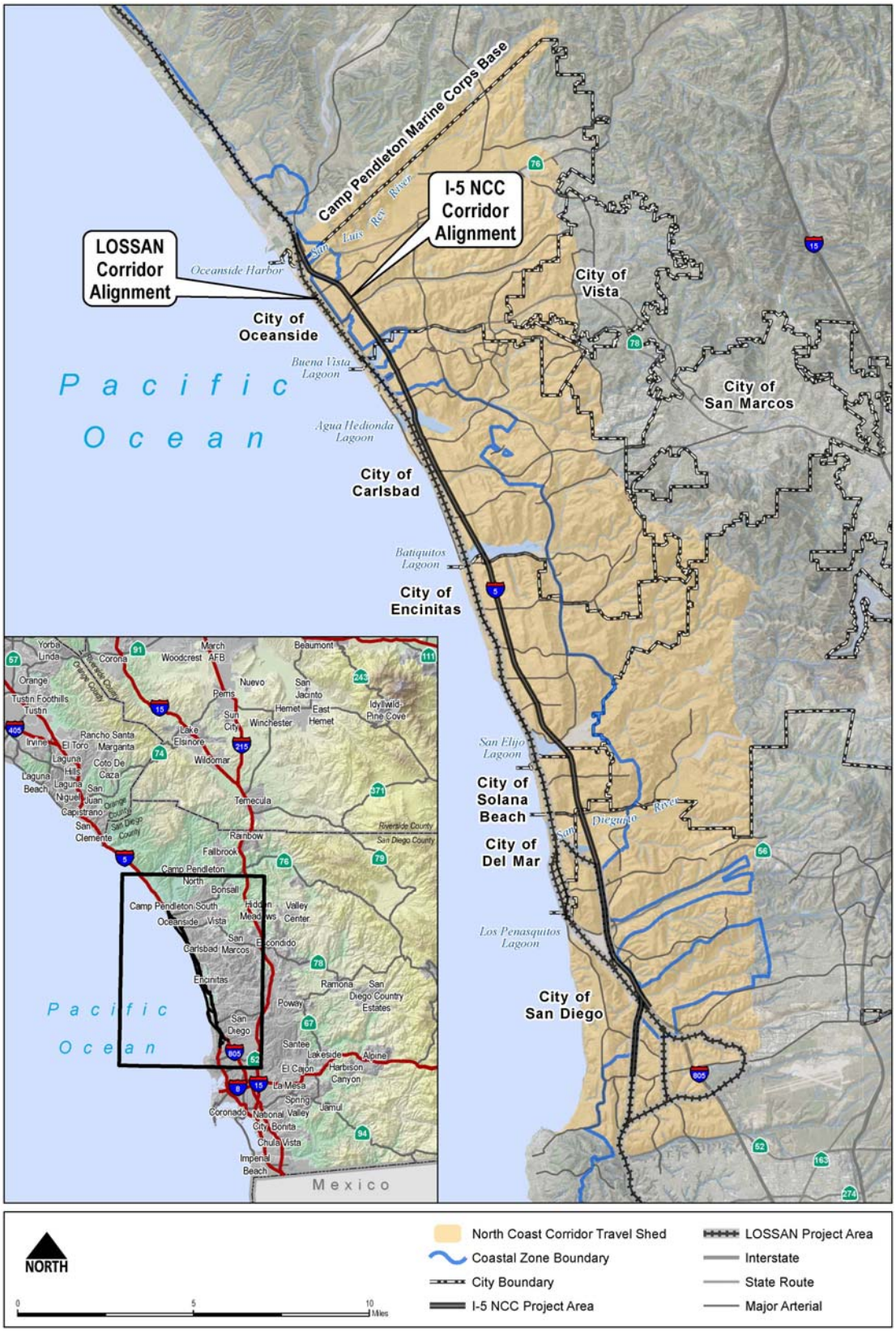
ES.1.2 Coastal Zone Management Act and the California Coastal Act

In 1972, the United States Congress passed the Coastal Zone Management Act (CZMA) with the overall goal to "preserve, protect, develop, and where possible, restore or enhance the resources of the nation's coastal zone." The CZMA is a federal and state partnership that manages coastal resources and encourages states to develop coastal management programs to implement the federal CZMA.

In 1976, the California State Legislature adopted the Coastal Act to implement the CZMA. The Coastal Act is the foundation of the California Coastal Management Program (CCMP), which includes the basic policies for managing and balancing the use of resources for state and national interests in California's coastal zone. The enforceable policies of the CCMP are the Chapter 3 policies of the Coastal Act.

Development activities requiring a coastal development permit in the Coastal Zone are regulated by the Coastal Commission and local governments through their respective coastal development permit processes. Coastal Act Chapter 3 policy mandates and coastal development permit requirements are implemented by local governments (cities and counties) pursuant to a certified LCP. A PWP is an entitlement for approval of public works projects, which remains under the authority of the Coastal Commission irrespective of coastal permit jurisdictional boundaries, and is an alternative to project-by-project review for public works which could otherwise require multiple coastal development permits for different components of a public works project.

FIGURE ES-1: REGIONAL AND NORTH COAST CORRIDOR MAP



ES.1.3 SANDAG and Caltrans as Lead Agencies

SANDAG and Caltrans have prepared the NCC TREP/PWP to plan for and implement a series of projects in a comprehensive and coordinated manner to meet a mobility vision as defined in the 2030 Regional Transportation Plan (RTP) and which would serve to improve and maintain public access to significant coastal resources in the corridor. This vision provides for an efficient and integrated system of transit, local roadways, highways, pedestrian, and bicycle facilities that facilitate the movement of people, goods, and services within the NCC. As an alternative to maintaining and improving transportation facilities and addressing coastal resource impacts on a project-by-project basis, the TREP/PWP provides a planning, analytical, and implementation mechanism to address improvements throughout the NCC on a comprehensive, system-wide basis consistent with Coastal Act mandates that focus on protecting, enhancing, and maintaining coastal resource values, and maximizing public access to coastal resources and recreational facilities.

ES.1.4 TREP/PWP Procedural Background

The TREP/PWP proposes to improve and maintain existing public transportation facilities of regional, state, and national significance, including transit, local roadways, highways, pedestrian, and bicycle facilities. The TREP/PWP also includes projects and measures to enhance and restore regionally significant coastal resources. The TREP/PWP encompasses land area within the coastal zone and includes a comprehensive program for planning and implementing mobility enhancements, public transportation system improvements, and coastal resource enhancements within the cities of San Diego, Del Mar, Solana Beach, Encinitas, Carlsbad, and Oceanside. In addition, the TREP/PWP includes highway and community enhancement improvements within the permit jurisdiction of the Coastal Commission, including portions of existing highway facilities located within lagoons and other areas not subject to a certified LCP. Given the scope of the TREP/PWP program and long-term goals for improving regional mobility and enhancing regionally significant coastal resources, program improvements would cross numerous jurisdictional boundaries and be implemented in phases through 2030 as funds, regional priorities, and transportation and resource benefits and impacts are determined.

Without a PWP, proposed highway improvements and associated community enhancements would be subject to coastal development permit requirements as applied by the Coastal Commission or by the cities of San Diego, Encinitas, Carlsbad, and Oceanside for which the Coastal Commission has certified LCPs. As an alternative to the project-by-project coastal development permit process, implementation of the proposed highway improvements and community enhancements may be achieved pursuant to the PWP process. The PWP allows for efficient and expeditious processing of public works projects by eliminating the need to separately coordinate numerous individual coastal development permits through separate jurisdictions. The proposed highway improvements and community enhancements are alternatively subject to the PWP process, which is intended to provide consistency in review, analysis, processing, and implementation under the authority of the Coastal Commission irrespective of coastal permit jurisdictional boundaries.

The TREP/PWP also presents a comprehensive and integrated plan for reviewing all rail and highway transportation projects and associated community and coastal resource enhancements in the corridor. Because both individual rail and highway projects would be subject to the Coastal Commission Federal Consistency review process, the TREP/PWP provides a comprehensive mechanism for conducting a federal consistency analysis.

ES.2 CONTEXT

ES.2.1 Policy Context: Regional Sustainability Efforts

The corridor vision encompasses a balanced, integrated approach that would implement transportation solutions for both the I-5 and LOSSAN rail corridors, as well as create unique resource enhancement opportunities as part of the transportation improvements. Protection and enhancement of coastal resources and improved mobility are necessary to achieve the regional transportation system and corridor visions, to improve the quality of life in the coastal communities, and to ensure continued use and enjoyment of coastal resources for the millions of people who visit the corridor each year.

The region utilizes and promotes the sustainability programs, policies and strategies described herein to develop an integrated approach to solving potentially conflicting goods movement and transportation issues both within and outside the NCC. The current deficiencies in the transportation system can generally be attributed to the following:

- Continued population growth due to longer lifespans and increased birthrates, coupled with less outward migration than forecast. From 1970 to 2006, San Diego County more than doubled in population to over 3 million residents. Further, growth is not only occurring in the NCC, but throughout those regions served by the I-5 and LOSSAN corridors, including Orange County and Riverside County to the north, Imperial County to the east, and Baja California, Mexico to the south. Travel demand in the corridor has largely been driven by this population and housing growth as land has become scarce within the travel shed, requiring more people to commute further for employment.
- Limited revenue for implementation of numerous regional transportation needs. Despite the increase in transportation demand, transportation funding has not kept pace. In addition, the purchasing power of the traditional funding sources such as the gasoline tax has been reduced over time because of increased fuel efficiency and rising construction costs. The region must continually seek cost effective strategies that are balanced with community impacts and other quality of life standards, as well as integrated with land use decision.
- Regional goals of livability and sustainability require a healthy economy, improved and efficient mobility, and reliable transportation systems. Focusing transit investments in areas with land uses that support an efficient transit system discourages sprawl by implementing projects in urban and suburban areas and not open space or rural areas, thereby limiting impacts to natural resources. It is estimated that 70% of future job and housing growth will occur within such “transit investment areas”. [1]
- The NCC is part of a regional system requiring solutions that are complementary to other corridors and communities outside of the region and the coastal zone. The feasibility of new solutions is at least partially affected by historical decisions that dictate the location, extent, use and demands on the existing and planned transportation facilities. For example, I-5 was originally built as an eight-lane freeway in the 1960s and 1970s and has not had any major improvements since then to keep pace with the significant population, employment, and travel-demand growth in the corridor over the last 40 years. Through 2050, it is forecast that 56% of new residences will be constructed, and 42% new jobs located within a 10-minute walk of high-frequency transit stations in the region,

[1] *2050 Regional Growth Forecast*, SANDAG, February 2010.

indicating that development of new, multi-modal transportation facilities is necessary to meet these future demands.[2]

The proposed TREP/PWP, as well as the associated *I-5 NCC Project Draft EIR/EIS* and the *San Diego NCC – Corridor System Management Plan* (CSMP) utilize land use and growth projections from the adopted 2030 RTP, which is the current blueprint for a transportation system in the region. However, a 2050 Regional Growth Forecast was recently adopted by the SANDAG Board of Directors in February 2010 that further demonstrates and supports the need for improved and efficient multi-modal transportation options to meet forecast growth and transportation demands in the region and beyond.

The 2050 Regional Growth Forecast provides a starting point for regional planning. The forecast is not intended to be a prescription for future growth. Rather, the forecast is intended to show possible future development patterns, based on regional projections and local input.

After 40 years of growth; changes in travel patterns, surrounding land use, travel demand, and transportation funding availability; the importance of the regional transportation systems at the local, regional, and national levels; and the importance of addressing other aspects of "quality of life", a new vision for the NCC travel shed has been developed. The new vision is reflected within the proposed TREP/PWP as it seeks to maximize the utilization of existing facilities, move people (not vehicles), provide reliable transportation options, improve coastal access and natural resources, provide a flexible foundation for further improvements, and be integrated with land use and activity centers.

SANDAG works with local governments on a variety of sustainable programs for the benefit of the entire region. The TREP/PWP program would further the goals of multiple ongoing and proposed regional sustainability efforts aimed at reducing energy consumption and associated air emissions, facilitating smart growth and multimodal transportation, and improving and protecting the area's unique coastal resources.

ES.2.2 Physical Context: Land Use, Transportation, and Coastal Resources

Land Use

Six San Diego County cities lie entirely or partially within the NCC: San Diego, Solana Beach, Del Mar, Encinitas, Carlsbad, and Oceanside. In addition, six coastal lagoons and associated open space and habitat preservation areas are located within the corridor.

Historic development trends in the corridor have not supported transit services as the majority of land in the NCC was developed when local land-use decisions supported low density, single-use development. This land use configuration alternatively required an extensive highway and arterial network to connect origins and destinations. Rail transit is a relatively recent addition to the transportation infrastructure within the corridor. With the addition of COASTER and SPRINTER rail transit services in 1995 and 2008, respectively, and considering the limited amount of remaining undeveloped land in the corridor, local jurisdictions and SANDAG are reexamining land use policies and development patterns and have developed policies to introduce Smart Growth development clusters into the corridor to accommodate future growth with higher density, mixed-use development serviced by transit.

Within the corridor, existing land uses vary. The majority of land located directly adjacent to the I-5 and rail rights-of-way (ROW) has been developed for residential, light industrial, and/or commercial use, and much of the corridor's population density occurs along these transportation facilities; however,

[2] *2050 Regional Growth Forecast*, SANDAG, February 2010.

many significant coastal open space and natural resource areas also occur along the ROW, particularly where these facilities cross over Los Peñasquitos Creek, Carmel Valley Creek, the San Luis Rey River, and Los Peñasquitos, San Dieguito, San Elijo, Batiquitos, Agua Hedionda, and Buena Vista lagoons.

North Coast Corridor Travel Customers

The term "travel shed" is generally used to define a corridor where trips tend to cluster in a linear pattern with feeder routes (highway, transit, non-motorized) linking to arterials carrying longer distance trips within the larger metropolitan area. The entire NCC travel shed is approximately 30 miles long, consists of approximately 111,215 gross acres, and is home to about 0.5 million people. While this TREP/PWP addresses only the portion of the travel shed located in the coastal zone (approximately 11,066 gross acres), much of the travel shed's primary transportation facilities, namely the I-5 highway and LOSSAN rail corridor facilities, are located almost entirely in the coastal zone and are critical not only to maintaining access to the corridor's coastal areas but also to maintaining the regional, interregional, and international transportation systems.[3]

Existing Rail and Transit Facilities

The LOSSAN rail corridor connects the major metropolitan areas of Southern California and the Central Coast, serves some of the most populous areas of the state, and runs through six counties: San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego. It is the second busiest intercity rail corridor in the nation. Amtrak's Pacific Surfliner service, Metrolink, SPRINTER and COASTER commuter rail services, and BNSF Railway and Union Pacific (UP) freight services all operate along parts of the corridor.

The east-west rail line in the NCC generally runs parallel to the SR-78 corridor. The SPRINTER passenger rail operates approximately 18 hours a day (with limited freight service operating three nights a week) and serves 13 stations on the 22-mile line between the Oceanside Transit Center and the Escondido Transit Center. Service is provided every 30 minutes in both directions. SPRINTER passenger service was initiated in March 2008 and ridership averaged about 7,000 passengers per day by April 2009.

Both public and private buses operate within the corridor. Public bus service is provided by the North County Transit District (NCTD) in the northern and central areas, and the San Diego Metropolitan Transit System (MTS) in the south. Improvements proposed within both the I-5 and LOSSAN rail corridors will require coordination with NCTD and MTS to incorporate potential benefits to bus passengers. Private coach services, Greyhound, and airport shuttles all utilize I-5.

In addition, some existing facilities and programs in the corridor encourage vanpooling and carpooling. SANDAG's Regional Vanpool Program provides subsidies to vanpool participants to encourage ridesharing. Within the corridor, SANDAG subsidizes about 186 vanpools, which serve approximately 1,500 people each day. SANDAG also provides ride-matching services to encourage carpooling. Additionally, nine Park-and-Ride parking lots are located in the corridor to facilitate carpooling, vanpooling, and regional transit ridership. Carpool lanes are provided on I-5 from the I-805 interchange to the interchange with Manchester Avenue.

Existing Highway and Major Arterial Facilities

I-5 is the principle north-south transportation corridor in the western US and extends from the US/Mexico international border to the US/Canada international border. It has been named by the

[3] *San Diego NCC – CSMP*, July 2010

federal government as one of six “Corridors of the Future” based on its essential role in interstate and international commerce. In Southern California, I-5 connects San Diego County with Orange County and the Los Angeles metropolitan area. At the north edge of the corridor, I-5 provides the primary access to Camp Pendleton, the country’s second largest Marine Corps Base. Twenty miles south of the corridor, I-5 ends at the San Ysidro Port of Entry, the world’s busiest international border crossing.

Regional arterials and state highways provide access to and within the corridor. Coast Highway and El Camino Real, two main north-south arterials supplement some of the local circulation provided by I-5. In addition to the north-south regional arterials, there are three east-west state highways that intersect I-5 and provide access to the corridor: SR-76; SR-78; and SR-56.

Numerous east-west arterials also provide access to and from I-5 to the residential areas, places of employment, retail, and other destinations of the corridor. Many of these arterials have gaps due to environmental constraints. Capacity expansions or extensions are constrained by existing development and sensitive environmental resources.

Existing Coastal Access and Recreation Facilities

The corridor includes about 30 miles of Pacific Ocean coastline with world renowned public beaches, coastal sandstone bluffs, and six lagoons that are part of river valley systems. Scenic public beaches include La Jolla Shores, Torrey Pines State Beach, Del Mar Beach, Cardiff State Beach, San Elijo State Beach, Moonlight State Beach, Leucadia State Beach, Carlsbad State Beach, and Oceanside State Beach. The beaches are used for surfing, swimming, tidepooling, camping, hiking, fishing, sports, and relaxation. Approximately 2 million trips to corridor beaches are made each year (one-half of all beach trips in San Diego County). Existing primary access to these coastal areas is by private automobile. Nineteen of the 30 interchanges on I-5 in the travel shed provide direct access to the corridor’s beaches and harbors. While the majority of access to the corridor’s coastal areas is provided by vehicle (approximately 70%), all of the travel shed’s north-south passenger rail services also support access to these coastal beaches and/or lagoons, with some circulation and local access obtained by foot and bicycle.

The lagoons in the corridor have varying levels of recreational and educational facilities, including trails and interpretive facilities. Many of the corridor lagoons provide coastal and upland recreation opportunities. Additional upland recreation areas within the corridor include San Luis Rey River Trail, Los Peñasquitos Canyon Preserve, Torrey Pines State Reserve, and San Dieguito River Park, in addition to several other smaller community parks and open spaces.

Within the NCC there is an existing bicycle and pedestrian network that provides access to the coast and other upland recreation areas. Like the corridor’s arterial network, gaps and barriers in the routes prevent fulfilling many local and longer distance trip needs. SANDAG has developed a San Diego Regional Bicycle Plan which will encourage the development of a unified bicycle system throughout the region. The goal of the plan is to connect local and regional activity centers, transit stations and regional trail networks while serving the needs of all bicycle riders.

Most transit trips in the NCC are commuter trips, but transit infrastructure is in place that could serve tourist and recreational trips accessing coastal areas. All COASTER commuter rail stations in the corridor, with the exception of Sorrento Valley, are located within blocks of a coastal beach or lagoon; however, most service is provided during weekday commute hours and, therefore, is not presently conducive to facilitating access to the beach. Most corridor bus routes provide local and circulator service. Although infrastructure is there, public transit is not currently a viable mode for most people to

access coastal resources. Additionally, service frequencies are limited by constraints on transit operations funds.

Existing Natural Resources

The coastal watersheds, lagoons and upland areas in the corridor consist of a range of diverse habitats and ecosystems that support a variety of plant and wildlife species. The corridor's most significant natural resource areas, such as the corridor's six coastal lagoons, also support some of the region's most significant passive and active coastal recreational opportunities for San Diego residents and visitors. The TREP/PWP describes the most prominent marine and environmentally sensitive habitat areas in the corridor.

ES.3 The Corridor Problem and Vision

The regional transportation system's vision, goals and objectives provide the foundation for the mobility, access and resource vision for the NCC. The corridor vision encompasses a balanced, integrated approach that would implement transportation solutions for both the I-5 and LOSSAN rail corridors, as well as create unique resource enhancement opportunities as part of the transportation improvements. Protection and enhancement of coastal resources and improved mobility in the NCC are necessary to achieve the regional transportation system and corridor visions, to improve the quality of life in the coastal communities, and to ensure continued use and enjoyment of coastal resources for the millions of people who visit the corridor each year.

ES.3.1 The North Coast Corridor Problem

The NCC is experiencing a crisis that extends across jurisdictions, resources, infrastructure, and users. There are problems and deficiencies related to:

- Transportation and mobility;
- Access to coastal communities and resources; and
- Preservation of natural habitats and environments.

Mobility – Transportation Deficiencies

Larger in area than both Rhode Island and Delaware combined, and home to more people than 20 of the 50 states, San Diego County contributes significantly to the economic, political, social, recreational, and environmental well-being of California and the US. The county's location in the southwest corner of the US makes it the front door to the state and country from the land ports of entry at the border with Mexico and San Diego Bay seaports. People and goods depend on the county's rail and highway transportation network to access local, regional, state, and interstate destinations, and the transportation facilities in the NCC are key links in that regional transportation network; however, the transportation system in the NCC is breaking down because of:

- Historic population and travel growth in the corridor, region, and state from 1970 to 2009;
- Physical constraints on transportation infrastructure and capacity; and
- Continuing growth into the future.

Travel demand in the NCC has, and will continue to strain the existing transportation infrastructure and services. Both the I-5 freeway and LOSSAN rail corridor are plagued by deficiencies that inhibit travel and access in the corridor. In addition, options for non-motorized travel in the corridor contain barriers and gaps making it difficult to complete local trips by foot or bike. In summary:

- I-5 was originally built as an eight-lane freeway in the 1960s and 1970s and has not had any major improvements since then to keep pace with the significant population, employment, and travel-demand growth in the corridor over the last 50 years.
- Highway demand exceeds capacity, resulting in traffic congestion, delay, and long travel times in the corridor, particularly for commute trips during the peak periods and recreational trips during the weekends.
- Highway congestion and delay result in unreliable and unpredictable trips for travelers.
- Due to topographic constraints, there are few arterial street alternatives to I-5 for local trips, which forces more trips onto the freeway.
- Existing transportation facilities focus primarily on moving cars, not people, through the corridor.
- Passenger rail capacity and performance is constrained by infrastructure deficiencies, specifically the high percentage of single-track sections within the corridor.
- Parking demand at rail stations exceeds capacity, limiting access to the rail corridor.
- The bicycle and pedestrian transportation network contains barriers, gaps, and substandard facilities, which discourages local bike and walk trips and inhibits access to coastal areas.
- Population, employment, and coastal recreational use are projected to continue to grow, placing even larger demands on the highway, rail, and trail systems in the corridor. Spillover traffic will negatively affect local arterials and coastal access routes.

To maintain and enhance mobility in the corridor and provide access to coastal communities and resources, improvements are needed to the corridor transportation system. These improvements should:

- Address capacity needs on the highway since travel by car, including HOVs, will continue to comprise the majority of trips in the corridor.
- Expand infrastructure that will serve and encourage alternatives to SOV trips, including carpools, vanpools, and transit.
- Increase options for non-motorized access to the coast, particularly for recreational trips.

Coastal Access and Resource Deficiencies

Despite the numerous coastal recreational resources and many points of access to the coast in the corridor, access to coastal communities and coastal recreational and natural resources is hampered by the transportation system deficiencies and mobility constraints summarized above. Traffic congestion, travel delays, inadequate and infrequent transit facilities and services, and incomplete bike and pedestrian networks together lead to limits and difficulties for people accessing the coast.

In addition to corridor mobility issues, the NCC has water quality, lagoon, and natural habitat deficiencies as a result of:

- Direct and indirect impacts of development, including the transportation facilities that cross these resources, that has negatively affected water quality that is essential for protection of sensitive coastal resources and water-dependent recreation.
- Physical alteration of lagoon areas from construction of highway and rail crossings and realignment and/or channelization of inland waterways have affected water quality and directly affected sensitive habitat areas. Polluted stormwater runoff and historic development encroachment of adjacent land uses have also affected lagoon areas by degrading water quality and substantially reducing the amount and quality of transitional and upland habitat areas that typically provide

buffers between adjacent land uses and the sensitive habitats and species supported by the lagoons

- Incremental loss of habitat areas resulting from urbanization in the corridor, including the existing transportation facilities, has resulted in significant cumulative impacts to open space areas, lagoon and inland waterways, transitional and upland habitats and the numerous special status plant and animal species they support. As a result, sensitive resources including wetlands, critical habitat, sensitive plant and animal species, and surface waters have continued to decrease in abundance and quality.

ES.3.2 The Corridor Vision

The corridor vision includes a multi-modal transportation program that both encourages alternatives to single occupant auto travel and addresses the growing travel demands in the corridor. Due to the large volume and diversity of trips in the corridor, improving and maintaining access and mobility cannot be achieved by focusing efforts on a single mode; therefore, the vision for the multi-modal corridor:

- Expands rail corridor train and passenger capacity and improves trip reliability.
- Addresses highway operational deficiencies to improve trip reliability.
- Focuses highway-capacity improvements on carpool, bus rapid transit (BRT), and vanpool facilities to move more people and not only cars.
- Reduces travel times and acts as an incentive to use HOVs.
- “Manages” the carpool/vanpool lanes by selling, through tolls, excess capacity to SOV drivers.
- Uses the fee revenue to support corridor transportation, including services like expanded park and rides and BRT on the managed lanes.
- Eliminates barriers and closes the gaps in the bicycle and pedestrian route and trail network to improve local and recreational access to coastal resources.
- Protects and enhances natural resources, coastal resources, and corridor lagoons.

SANDAG (and Caltrans) has also directly linked these multi-modal transportation improvements to coastal access and resource enhancements through adoption of:

- The Regional Comprehensive Plan (RCP) and Smart Growth Opportunity Areas map that promote pedestrian-friendly development near transit stations to encourage more walking, biking and transit trips and preserve open space and natural habitat areas
- The Environmental Mitigation Program (EMP) that funds (via *TransNet*, the voter approved local transportation sales tax) resource enhancement projects as part of specific transportation projects.

ES.3.3 Implementing the Comprehensive Vision

Moving forward with a balanced approach to transportation project implementation and resource enhancement would help achieve the sustainability, coastal and mobility vision for the NCC. Transportation project implementation would address mobility needs while the associated resource enhancement program would address coastal resource protection, restoration, and enhancement needs. As a program, the TREP/PWP is intended to accommodate expected corridor and regional growth in population and travel in an environmentally sustainable way. Through the program, coastal resource restoration, enhancement and expansion would be facilitated by environmentally sensitive engineering, redevelopment that incorporates design measures to accommodate resource restoration and enhancement programs, timing and phasing of corridor improvements, and by implementation of a corridor-wide resource enhancement program. The resource enhancement program would be focused

on improving water quality, and coastal and upland natural habitat areas. These transportation improvements would also ensure continued and enhanced access to existing and improved coastal and upland recreational facilities. To be successful, the transportation program must include transit, highway, bike, and pedestrian improvements. Corridor customers vary widely and include commuter, recreational, business, freight, and other customers. These different markets require different transportation solutions.

Collaborative implementation of the transportation program and projects through the NCC TREP/PWP would help:

- Expand coastal access;
- Improve water quality;
- Support lagoon restoration;
- Jump-start habitat creation; and
- Meet corridor transportation needs.

ES.4 Scope of Planned Improvements

The comprehensive program of NCC improvements described and assessed within the TREP/PWP includes those to the LOSSAN rail corridor; the I-5 highway corridor; other corridor transportation facilities; community, pedestrian, bicycle, and recreational infrastructure; and the corridor's natural resources and environment. Corridor projects have been developed in response to existing infrastructure deficiencies and the need for both coastal resource protection and enhancement, and transportation improvements.

ES.4.1 LOSSAN Rail Corridor

The *LOSSAN Final Program EIR/EIS* (September 2007) included programmatic level plans for rail improvements in the NCC. The *San Diego – LOSSAN Corridor Project Prioritization Analysis* (July 2009) quantified operational improvements and other benefits and impacts of potential rail projects, and then prioritized implementing these projects to optimize phased improvements. Phases are divided into initial- (79 train weekday schedule), mid- (93 train) and long-term (119 train) implementation. Some projects were not recommended for initial- through long-term implementation due to various factors.

The projects under consideration are described in Chapter 4 of the TREP/PWP. They include a mix of double tracking, other track capacity enhancements (cross-overs, station 'stub' tracks, station pass-through tracks), rail bridge replacement, pedestrian crossings, vehicle crossing improvements, parking expansion, new platform locations, and other station enhancements. Generally, track projects directly improve capacity and, therefore, improve reliability through reduced travel times and increased service levels. Other improvements may increase access to the rail services, passenger experience, and other factors, which may also lead to increased ridership.

ES.4.2 I-5 Corridor

The proposed I-5 NCC project would widen the existing I-5 highway to provide two managed or high occupancy vehicle (HOV) lanes and, potentially, an additional general purpose (GP) lane in each direction. The project would begin at La Jolla Village Drive in San Diego and extend northward approximately 27 miles to Harbor Drive in Oceanside. The five alternatives currently under consideration are:

- **No Build –** Includes ongoing operations and maintenance and separate projects in the corridor.

- **10+4 with Buffer –** Ten GP lanes with four HOV/Managed Lanes in the median separated from the GP lanes with a painted stripe buffer.
- **10+4 with Barrier –** Same as 10+4 with buffer but with a concrete barrier instead of painted buffer.
- **8+4 with Buffer –** Eight GP lanes with four HOV/Managed Lanes in the median separated from the GP lanes with a painted stripe buffer.
- **8+4 with Barrier–** Same as 8+4 with buffer but with a concrete barrier instead of painted buffer.

Under all "Build" alternatives, two median HOV/Managed Lanes would be added between La Jolla Village Drive and the I-5/I-805 merge. From this merge to Manchester Avenue, two median HOV/Managed Lanes would be added (two currently exist in the segment so the total would be four) and up to two GP lanes. Between Manchester Avenue and SR-78, four HOV/Managed Lanes and up to two GP lanes would be added. North to Harbor Drive, four HOV/Managed Lanes would be added. The number of auxiliary lanes included varies by alternative and segment. Project elements are summarized in the following sections.

ES.4.3 Other Transportation Enhancements

In order to fully understand and analyze the program of improvements in the NCC, the TREP/PWP includes other transportation enhancements planned for the corridor. Inclusion of these projects provides a comprehensive understanding of the mobility and resource benefits and impacts planned for the corridor. Each of these additional projects will be analyzed through separate environmental processes and are not addressed in the LOSSAN or I-5 environmental documents:

- The I-5/State Route 56 Interchange Project proposes to improve the traffic operations on I-5 between Del Mar Heights Road and Carmel Valley Road, and on SR-56 between I-5 and Carmel Country Road to reduce congestion at the El Camino Real and Carmel Valley Road intersection, as well as at additional congestion on surface streets and through neighborhoods.
- The I-5/SR-78 interchange project is proposed to address existing congestion at the I-5/SR-78 interchange. Four alternatives are under consideration, ranging from No Build to an interchange with direct freeway-to-freeway connectors and Direct Access Ramps (DARs).
- The Sorrento Valley Road/Roselle Street/I-5 Interchange experiences heavy congestion during commute times. This project proposes improving the interchange with I-5 at Sorrento Valley Road and improving local street circulation in Sorrento Valley to separate local street circulation from regional traffic. This will address competing access to the Sorrento Valley business center. Additionally, improvements will accommodate local circulation of transit, bicycles, and pedestrians.
- The Encinitas Boulevard/I-5 Interchange Modification Project will construct improvements to ease congestion, improve traffic operations, and increase the safety of motorists, bicyclists, and pedestrians within the City of Encinitas. The interchange provides access to downtown, coastal attractions, the Encinitas COASTER Station, and commercial, retail and residential areas.

ES.4.4 Community Enhancements

Caltrans and SANDAG met with communities to identify community enhancement opportunities that would benefit from simultaneous construction and improve how the I-5 highway project interfaces with adjacent communities. These enhancements would make connections in the existing bicycle and pedestrian network, improve trails, and enhance other new and existing multimodal transportation facilities. Design and construction of these features would occur in coordination with each affected city

and include future formal cooperative agreements between Caltrans and each city, where Caltrans would build these features and the cities would be responsible for their maintenance.

ES.4.5 Natural Resource and Environmental Enhancements

A wide range of projects are planned to restore and protect water quality and environmentally sensitive habitat areas (ESHA) in the NCC. The TREP/PWP improvement program will upgrade the I-5 highway with current treatment Best Management Practices (BMPs) to the Maximum Extent Practicable. The program will include analyzing the entirety of the corridor from a water quality perspective in relation to the impaired receiving water bodies in the NCC and provide for a more comprehensive approach to analyze the hydrology of the entire project area for purposes of improving water quality. Caltrans approved treatment BMPs would consist of permanent measures to improve storm water quality during operation of the facility after completing the construction, wherever feasible.

In addition to providing a comprehensive approach to addressing water quality for the NCC, the TREP/PWP includes a Resource Enhancement Program as part of the Implementation Framework, described in more detail in Chapter 6, which provides a consistent, comprehensive, and proactive planning and management process to address project-specific impacts with regional resource enhancement efforts throughout the corridor. The enhancement of natural resources in the NCC requires a unique, comprehensive approach to resource enhancement with input from multiple regulatory agencies and stakeholders. For this reason, the Resource Enhancement Program maintains flexibility when prioritizing and phasing resource enhancement projects as advanced or concurrent mitigation for potential transportation project impacts, as well as projects which are not mitigation but instead inherently enhance resources as a result of project implementation.

The result of project implementation through the TREP/PWP would be a coordinated and comprehensive program for mitigation and resource enhancement which exceeds traditional and often-fragmented project-specific mitigation benefits by strategically acquiring restoration opportunities and preserving ESHAs in conjunction with facilitating comprehensive restoration plans for the region's most significant coastal resources. Given the unique nature of the corridor program improvements that encompass areas containing significant resources, the TREP/PWP Resource Enhancement Program includes multiple elements for completing and facilitating resource enhancement and habitat mitigation on a corridor-wide level, focusing on securing no net loss of habitat, habitat preservation, and facilitating comprehensive lagoon restoration, maintenance, and planning programs.

Regionally important restoration opportunities in the I-5 corridor have been discussed with the resource agencies. San Elijo and Buena Vista Lagoons are the two lagoons within the project limits where large-scale restoration plans are underway. SANDAG/Caltrans have been working with the cities and resource agencies to help move these restoration projects forward by assisting in the planning and helping to fund some of the technical studies necessary for the planning and environmental review process. In addition to the regionally important lagoon mitigation, SANDAG/Caltrans are funding a study to optimize I-5 bridges proposed for replacement for water exchange on either side of I-5. Scientists from Scripps Institution of Oceanography and a consultant team are in the process of examining all aspects of lagoon tidal and freshwater hydrology and will propose bridge designs to minimize tidal muting east of I-5 and lead to the possible enhancement of the existing wetlands. The objective of the study is to evaluate potential effects of bridge widening and formulate bridge design concepts that are hydraulically more efficient and would enhance water quality and reduce tidal muting. By reducing tidal muting with new hydrodynamic optimized I-5 waterway designs, increased tidal inundation can be achieved in the wetlands east of I-5, resulting in an increase in inter-tidal wetland habitat.

ES.5 Coastal Development Policies and Resources

The scope of improvements included in the NCC TREP/PWP were evaluated for consistency with applicable coastal development policies of the Coastal Act, and, where applicable, consistency with LCP policies for each affected, certified city in the NCC, and organized by Coastal Act issue area as follows:

- Energy Conservation and Emissions Reduction
- Promotion of Public Transit and Smart Growth
- Public Access and Recreation
- Marine Resources: Water Quality and Wetlands
- Environmentally Sensitive Habitat Areas and Special Status Species
- Archaeological and Paleontological Resources
- Coastal Visual Resources
- Site Stability and Management
- Agricultural Resources

The assessment builds on the discussion of mobility and resource deficiencies, and the vision and goals for the corridor, as these issues directly relate to the ability to evaluate potential coastal resource concerns and opportunities presented by the scope of improvements. Each of the Coastal Act issue area sections begins with a setting description of existing coastal resources in the NCC which could be affected by the scope of improvements. A discussion of potential coastal resource concerns, developed in consultation with Coastal Commission staff as general guidance in identifying potential resource issues to help frame the TREP/PWP impact analysis, is provided after each coastal resource setting description, which is followed by an impact analysis for the proposed rail and highway corridor improvements. The resource area impact analyses reflect those discussions contained within the *LOSSAN Final Program EIR/EIS* (September 2007) and the *I-5 NCC Project Draft EIR/EIS* (June 2010), where applicable. Each section then includes a discussion of resource opportunities and benefits presented by the scope of improvements followed by a series of Design/Development Strategies for proposed rail improvements, and Policies and Implementation Measures for the proposed highway and community enhancement improvements.

The Coastal Act Consistency analysis lists Coastal Act policy directives addressed in each section and evaluates proposed rail and highway corridor improvements for consistency with applicable policy requirements. The Coastal Act issue area sections conclude with a brief summary of the TREP/PWP's potential consistency with LCP policies for each certified city in the corridor affected by the scope of highway and community enhancement improvements, and includes a preliminary assessment of where specific LCP policies present potential conflicts for the improvements that could require amendment of the certified LCPs to ensure consistency with the TREP/PWP. Appendix A of the draft TREP/PWP includes a more detailed LCP Policy Consistency Analysis matrix for each city with a certified LCP potentially affected by the proposed TREP/PWP improvements.

California Coastal Act Policy Conflict Resolution

The analysis provided in Chapter 5 indicates proposed TREP/PWP improvements would result in fill of wetlands, impacts to ESHA, and impacts to agricultural resources. The TREP/PWP may be found consistent with the Coastal Act as these impacts would occur for purposes the Coastal Act allows and/or because the TREP/PWP complies with Chapter 3 policies to the extent necessary to achieve the basic state goals specified in Section 30001.5 of the Coastal Act. SANDAG and Caltrans recognize

a different conclusion could be reached regarding the TREP/PWP's consistency with Coastal Act policies which limit uses within and impacts to wetlands, ESHA and agricultural resources. Irrespective of the conclusion as to whether the TREP/PWP improvements may be inconsistent with Coastal Act policies because of these impacts, denying or modifying the TREP/PWP would itself conflict with policies in Chapter 3 of the Coastal Act. In the case of the North Coast Corridor TREP/PWP, denying or modifying the TREP/PWP to eliminate these potential inconsistencies would conflict with other Coastal Act policies that mandate protection of coastal resources by: 1) minimizing energy consumption and vehicle miles travelled and protecting air quality, 2) concentrating new development in or adjacent to areas able to accommodate growth, 3) providing and enhancing transit and non-automobile circulation, and assuring that the potential for public transit is provided for high intensity uses, and 4) protecting and enhancing public access to the coast and enhancing shoreline and upland recreation areas in the Coastal Zone.

The proposed TREP/PWP improvements will increase alternative transportation (such as trails, bike paths, transit, and shuttles) to minimize vehicle miles traveled, which will reduce energy consumption and emissions, including GHGs, consistent with requirements of the San Diego County Air Pollution Control District or the State Air Resources Board. Proposed rail improvements will reduce service delays and therefore reduce energy consumption and emissions from idling locomotives. The rail improvements will also allow increased frequencies of operation and reduced travel times which are correspondingly expected to increase ridership on LOSSAN passenger services and reduce energy consumption, vehicle miles traveled, and emissions.

Proposed highway improvements, including managed/HOV lanes, will have the following benefits that will reduce energy consumption, vehicle miles traveled, and air emissions:

- Reduce congestion and indirect, inefficient routing.
- Increase HOVs and bus rapid transit. Proposed highway improvements will concentrate existing and anticipated increased demand in highway travel on HOVs and bus rapid transit, thereby improving the competitiveness of these modes versus SOVs. Additional auxiliary and managed lanes, new and expanded park-and-ride facilities, improved bicycle and pedestrian features, ramp metering, and an improved transit-highway interface would improve traffic conditions, encourage alternative transportation modes, and reduce energy consumption and emissions as more people carpool or choose other modal options.
- Reduce the demand for new parallel roads or parallel road expansions in the Coastal Zone. I-5 will continue to become more congested without improvements, which likely would cause demand for new parallel roads. The TREP/PWP would substantially reduce or eliminate demand for new parallel or arterial facilities in the Coastal Zone.

Travel demand in the corridor has degraded, and will continue to degrade, the existing transportation infrastructure and services. Absent the proposed TREP/PWP improvements, existing and future deficiencies in the transportation facilities will result in reduced rail and auto reliability, increased travel time and corridor congestion, continued deficiencies in infrastructure for bicycle and pedestrian circulation, and resulting increased energy consumption and corresponding air emissions associated with travel.

The North Coast Corridor contains more than a dozen planned and potential Smart Growth areas that are located at each of the LOSSAN rail corridor stations, with the exception of Sorrento Valley Station. The proposed TREP/PWP includes transportation/transit infrastructure and service improvements intended to specifically serve these areas to help avoid increased traffic congestion, reduced mobility, and a deteriorating quality of life. Allowing approved and concentrated growth to occur in the already

urban corridor, supported by sufficient public infrastructure and services, would limit development sprawl into undeveloped or rural areas. Proposed TREP/PWP improvements to increase capacity and ridership on the existing LOSSAN rail corridor, add managed lanes on I-5 that allow for bus rapid transit (BRT) and encourage HOVs, and develop bike lanes, sidewalks and trails would encourage alternative modes of transportation in areas of concentrated urban growth where corresponding travel demands can be more readily accommodated. Focusing investment on these facilities would further support development of identified Smart Growth areas.

Absent the proposed TREP/PWP improvements, existing and future deficiencies in the transportation system will discourage anticipated and planned growth from occurring in the urban corridor and designated Smart Growth areas. Continued degradation in transportation infrastructure, reduced mobility, and associated environmental impacts result in a deteriorating quality of life, would encourage development outside the urban area for those seeking improved quality of life in undeveloped and rural areas.

The TREP/PWP will eliminate existing impediments to coastal access opportunities for residents and visitors and will substantially benefit coastal access and recreation. Proposed rail improvements will enhance access to the coast by increasing capacity and reliability, reducing travel time, and expanding service areas. Further, as the primary means for the public to reach shoreline access points and 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. Proposed TREP/PWP improvements focusing on HOV/managed lanes would give priority to ride-sharing, public transit and SOVs (when capacity allows) while reducing overall congestion, protecting and facilitating public access, and funding transit investments. The proposed TREP/PWP program would ensure that the corridor's large and varying customer base of HOVs, many of which are seeking access to coastal resources, would be provided with fast, reliable travel times.

A fundamental element of the TREP/PWP is that it will improve bicycle and pedestrian routes and trails which would enhance an existing network which provides access to the beaches, lagoons, open spaces, and coastal communities. Existing fragmented routes and trails of the network would be upgraded and completed, eliminating barriers and gaps. New under- and overpasses will connect and improve bicycle and pedestrian routes to the coast and lagoon areas. Pedestrian bridges and improved at-grade crossings along the LOSSAN rail corridor will provide new and improved pedestrian and bicycle crossings over the tracks, better connecting inland communities to area beaches.

Absent the proposed TREP/PWP improvements that would enhance public transit and reduce congestion on the rail and highway facility, and those that would provide for non-automobile circulation throughout the corridor by completing bike and pedestrian networks, coastal resources would continue to degrade, particularly as it relates to maintaining and enhancing mobility in the corridor to provide access to coastal communities, the corridor shoreline and upland recreational resources.

The TREP/PWP would improve conditions for coastal resources subject to an affirmative mandate by improving public transit and non-motorized transportation alternatives that reduce energy consumption and air emissions, resulting in improved air quality. The TREP/PWP would support Smart Growth, and would implement improvements to the existing transportation system that eliminate existing impediments and enhance coastal access opportunities for residents and visitors. In addition, although TREP/PWP improvements would result in impacts to wetlands and ESHA, impacts would be minimized and mitigated to the maximum extent feasible. Finally, the project includes a comprehensive Resource Enhancement Program that will significantly improve water quality, marine resources and ESHA—beyond what is required to mitigate the project's impacts. Accordingly, on balance, approval of the

TREP/PWP provides an enhanced and improved coastal recreational corridor. The TREP/PWP would protect, enhance, restore and maintain the overall quality of the coastal zone environment and its natural and artificial resources.

ES.6 IMPLEMENTATION

The TREP/PWP Implementation Chapter includes the program's Implementation Framework which coordinates the timing of rail, highway, and community and resource-enhancement project components to ensure highway improvements do not outpace other multimodal transportation improvements for the corridor, and that proposed transportation improvements do not outpace natural-resources restoration and enhancement.

The Implementation Framework includes a Preliminary Phasing Plan for proposed TREP/PWP improvements to ensure transportation improvements would be implemented to achieve a multimodal solution for regional transportation needs, and to ensure transportation improvements are implemented in conjunction with comprehensive restoration and enhancement plans for the region's unique natural resources. In addition, the Implementation Framework includes a Resource Enhancement Program which utilizes a combination of traditional and non-traditional measures to mitigate coastal resource impacts of the proposed mobility improvements, particularly as it relates to enhancing marine and environmentally sensitive habitat area resources. The constrained, primarily developed NCC leaves few opportunities for large-scale land purchases for restoration opportunities that could enhance the corridor's natural resources, and the NCC's lagoon habitats are biologically unique and cannot be replicated elsewhere; thus, opportunities to enhance these habitats require comprehensive solutions with improvements focused on ecosystem-wide benefits. The TREP/PWP's innovative approach to mitigate impacts to natural resources from road development in advance results in greater benefits to coastal resources on a corridor-wide level than if only ratio-based, project and site-specific mitigation were employed.

The Implementation chapter also describes the procedures the Coastal Commission will use to review and authorize development included in the TREP/PWP which is subject to Federal Consistency Review and/or PWP requirements. The TREP/PWP Resource Enhancement Program, in conjunction with the phased TREP/PWP Phasing Plan and development review procedures, would ensure that transportation improvements are implemented such that substantial coastal resource benefits and enhancements are secured and implemented throughout the corridor prior to or concurrent with transportation project implementation.

1.0 INTRODUCTION

The San Diego County coastal area contains some of the most heavily used beaches on the California coastline and offers varying coastline experiences enjoyed by the public year-round. These include sandy beaches, offshore reefs, rocky headlands, several harbors with marinas, and a number of other recreational facilities that support sport fishing, picnicking, boating, swimming, and natural resource and lagoon education centers. Northern San Diego County alone contains 30 miles of coastline and includes some of the largest remaining coastal wetlands in California. These coastal lagoons also provide exceptional recreational opportunities. Some have accessible sandy beaches at the shoreline; most have accessible trail systems in the upland areas surrounding the lagoons. The 1999 California Coastal Commission (Coastal Commission) Public Access Action Plan reports that 63% of the San Diego County coastal area is accessible to the public. This percentage has likely increased since 1999 given the ongoing efforts of the Coastal Commission and local governments to implement their respective coastal access programs intended to meet demand for recreational support facilities and access to these resources. The Coastal Commission Public Access Action Plan recognizes roadway congestion as one of the greatest impediments to public access in coastal areas and specifically notes that, among other things, traffic congestion and poor traffic circulation are significant problems where residents and visitors compete to use the same transportation system. In addition, there are limited transit and freeway options that provide access to the local transportation system used to access the beach and upland coastal recreation areas. As a result, maintaining acceptable transportation services and developing and using alternative transportation modes is critical for ensuring public access to recreational opportunities along the San Diego County coastline for both residents and visitors .

1.1 PURPOSE OF TRANSPORTATION AND RESOURCE ENHANCEMENT PROGRAM AND HIGHWAY PUBLIC WORKS PLAN

The San Diego Association of Governments (SANDAG) and California Department of Transportation (Caltrans) have prepared this North Coast Corridor (NCC) Transportation and Resource Enhancement Program and Highway Public Works Plan (TREP/PWP) to:

- Create a programmatic approach for implementing rail, highway, transit, bicycle, pedestrian, and community enhancement projects to improve and maintain mobility and access to coastal recreational resources in the NCC;
- Plan for and implement a comprehensive program to protect, restore, and enhance sensitive coastal resources along the NCC and to mitigate potential resource impacts caused by implementation of the transportation improvements;
- Provide a coordinated document to obtain federal consistency certification for the program of transit, highway, and resource enhancement projects in accordance with Chapter 3 of the California Coastal Act; and
- Obtain PWP approval for the highway and associated community enhancement projects included in this plan in accordance with applicable local coastal programs (LCPs) and Chapter 3 requirements of the California Coastal Act. (Rail projects that improve movement of freight are not subject to coastal development permit or PWP requirements of the California Coastal Act as a result of their status as a common carrier under the Interstate Commerce Commission Termination Act.)

1.2 Coastal Zone Management Act and the California Coastal Act

In 1972, the United States Congress passed the Coastal Zone Management Act (CZMA) with the overall goal to "preserve, protect, develop, and where possible, restore or enhance the resources of the nation's coastal zone." The CZMA is a federal and state partnership that manages coastal resources and encourages states to develop coastal management programs to implement the federal CZMA.

In 1976, the California State Legislature adopted the California Coastal Act (the Coastal Act) to implement the CZMA. The Coastal Act is the foundation of the California Coastal Management Program (CCMP), which includes the basic policies for managing and balancing the use of resources for state and national interests in California's coastal zone. The enforceable policies of the CCMP are the Chapter 3 policies of the Coastal Act. These policies address critical coastal resource issues including public coastline access, coastal and inland recreation, low-cost visitor activities, protection and enhancement of sensitive habitat and species, water quality, and agricultural and visual resources.

Development activities requiring a coastal development permit in the coastal zone are regulated by the Coastal Commission and local governments through their respective coastal development permit processes. Coastal Act Chapter 3 policy mandates and coastal development permit requirements are implemented by local governments (cities and counties) pursuant to a certified LCP. Upon certification of an LCP by the Coastal Commission, local governments assume coastal development permit responsibility for most new development within their jurisdictions.

A Public Works Plan (PWP) is an alternate vehicle for obtaining approval of large or phased public works projects, which remain under the authority of the Coastal Commission irrespective of coastal permit jurisdictional boundaries. A PWP is an alternative to project-by-project review for public works (which could require multiple coastal development permits for different components of a public works project). A PWP must be sufficiently detailed regarding the size, kind, intensity, and location of development to allow the Coastal Commission to determine its consistency with the policies in Chapter 3 of the Coastal Act or the certified LCP. Once the Coastal Commission approves a PWP, no coastal development permit is required if the development is consistent with the PWP. Instead, the permittee provides a notice of impending development (NOID) to the Coastal Commission and other parties. The Coastal Commission then reviews the NOID for consistency with the PWP; if the Coastal Commission determines that the NOID is consistent with the PWP, the development may proceed.

The majority of the TREP/PWP's transportation and community enhancement improvements would be located within the Northern San Diego County coastal zone; therefore, they would be subject to the coastal resource protection policies of the Coastal Act or, as applicable to the highway and community enhancement projects, the certified LCP. The TREP/PWP has been developed to evaluate NCC program consistency with the Coastal Act and applicable, certified LCPs to ensure that program components are implemented to provide for maximum protection and enhancement of public access, recreation, and sensitive coastal resources.

Increased population and travel demand coupled with limited highway and rail capacities have led to congestion in the NCC and constraints on regional mobility. In addition to addressing travel modes as an integrated system, this TREP/PWP provides an opportunity to plan for and implement a comprehensive program to protect, restore, and enhance sensitive coastal resources in the NCC as mitigation for potential resource impacts caused by implementation of the TREP/PWP improvements. For issues such as water quality, marine resources, and sensitive habitats associated with coastal lagoons, the TREP/PWP also provides a unique opportunity to restore and enhance resources degraded by previous development. The TREP/PWP is intended to *exceed* traditional resource

enhancement requirements for development impact mitigation by restoring corridor resources consistent with long-term protection and enhancement goals.

1.3 SANDAG and Caltrans as Lead Agencies

SANDAG is a regional planning agency governed by a board of directors comprising 19 city and county governments and a number of advisory representatives. SANDAG provides a forum for regional decision-making; builds consensus; makes strategic plans; obtains and allocates resources; plans, engineers, and builds public transportation; and provides information on a broad range of topics pertinent to the region's quality of life. In addition, SANDAG programs local, state, and federal transportation funds and provides a forum for addressing regional and multi-jurisdictional growth issues.

Caltrans serves as an advisory representative to SANDAG and is responsible for building and managing highway and freeway projects, providing inter-city rail services, permitting public-use airports and special-use hospital heliports, and working with local agencies to improve mobility. Caltrans carries out its mission of improving mobility through a number of programs that address highway transportation, mass transit, transportation planning, and administration. Caltrans' strategic goals focus on providing a safe transportation system for users and workers, maximizing transportation system performance and accessibility, efficiently delivering quality transportation projects and services, preserving and enhancing California's resources and assets, and promoting quality service. SANDAG and Caltrans' roles in transportation projects, as well as those for other agencies and operators, are outlined in Table 1-1.

Together, SANDAG and Caltrans prepared the TREP/PWP to plan for and implement a series of projects in a comprehensive and coordinated manner to meet a mobility vision as defined in the 2030 Regional Transportation Plan. This vision provides for an efficient and integrated system of transit, local roadways, highways, pedestrian, and bicycle facilities that facilitate the movement of people, goods, and services within the NCC. As an alternative to maintaining and improving transportation facilities and addressing coastal resource impacts on a project-by-project basis, the TREP/PWP provides a planning, analytical, and implementation mechanism to address improvements throughout the NCC on a comprehensive, system-wide basis consistent with Coastal Act mandates that focus on protecting, enhancing, and maintaining coastal resource values, and maximizing public access to coastal resources and recreational facilities.

1.4 TREP/PWP Procedural Background

Section 30114 of the Coastal Act defines public works, in part, as:

> (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. For purposes of this division, neither the Ports of Hueneme, Long Beach, Los Angeles, nor San Diego Unified Port District nor any of the developments within these ports shall be considered public works.
>
> (c) All publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any development by a special district.

TABLE 1-1: TYPICAL AGENCY ROLES FOR TRANSPORTATION PROJECTS [a]

	SANDAG	Caltrans	NCTD [b]	FHWA	FTA	FRA	Amtrak	BNSF
System Planning and Prioritization for Highway Projects	P	S						
System Planning and Prioritization for Transit Projects	P		S					
System Planning and Prioritization for Rail Projects	P	P [c]	S					
Lead National Environmental Policy Act (NEPA) Agency for Highway Projects		S [d]		P				
Lead NEPA Agency for Transit Projects	S [d]				P			
Lead NEPA Agency for Rail Projects	S [d]	S				P		
Lead California Environmental Quality Act (CEQA) Agency for Highway Projects		P						
Lead CEQA Agency for Transit Projects	P							
Lead CEQA Agency for Rail Projects	P	P [c]						
Funding	P	P [e]		S	S	S		
Project Development Highway	S	P						
Project Development Transit	P		S					
Project Development Rail	P	P [c]	S					
State Highway Owner/Operator		P						
Rail and Transit Owner/Operator			P				P	P

P = Primary Responsibility (Lead); S = Secondary Responsibility (Support/Input)
NCTD = North County Transit District; FHWA = Federal Highway Administration; FTA = Federal Transit Administration; FRA = Federal Railroad Administration; BNSF = Burlington Northern Santa Fe Railway

Notes:

(a) Roles and responsibilities related to maintenance and rehabilitation will differ.

(b) San Diego Metropolitan Transit System (MTS) owns the rail corridor from Downtown San Diego to the southern edge of Del Mar but does not operate any rail services within the NCC; however, the NCTD operates COASTER service on the MTS right of way (ROW) as well as on the NCTD ROW. Additionally, the MTS is responsible for planning and prioritizing transit services in the southern area of the project corridor.

(c) Caltrans has a primary role related to the intercity rail program

(d) SANDAG and Caltrans are responsible for preparing the environmental documents. Effective July 1, 2007, Caltrans has been assigned environmental review and consultation responsibilities under NEPA pursuant to Section 6005 of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (23 U.S.C. 327). The assignment applies to all projects on the State Highway System (SHS) and all Local Assistance projects off the SHS, with the exception of responsibilities assigned for certain Categorical Exclusions under the June 7, 2007 Memorandum of Understanding (MOU) with the FHWA, projects excluded by definition, and specific project exclusions. On projects for which Caltrans has assumed NEPA responsibilities, Caltrans has also assumed responsibility for environmental review and consultation under other federal environmental laws. The I-5 NCC project is excluded from the NEPA Pilot Program assignment under MOU 3.3.2.

(e) Caltrans programming responsibilities are limited to programs such as Proposition 1B intercity rail funds, Amtrak and STIP Interregional Improvement Program (IIP).

Section 30605 of the Coastal Act states, in part:

> To promote greater efficiency for the planning of any public works or state university or college or private university development projects and as an alternative to project-by-project review, plans for public works or state university or college or private university long-range land use development plans 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).

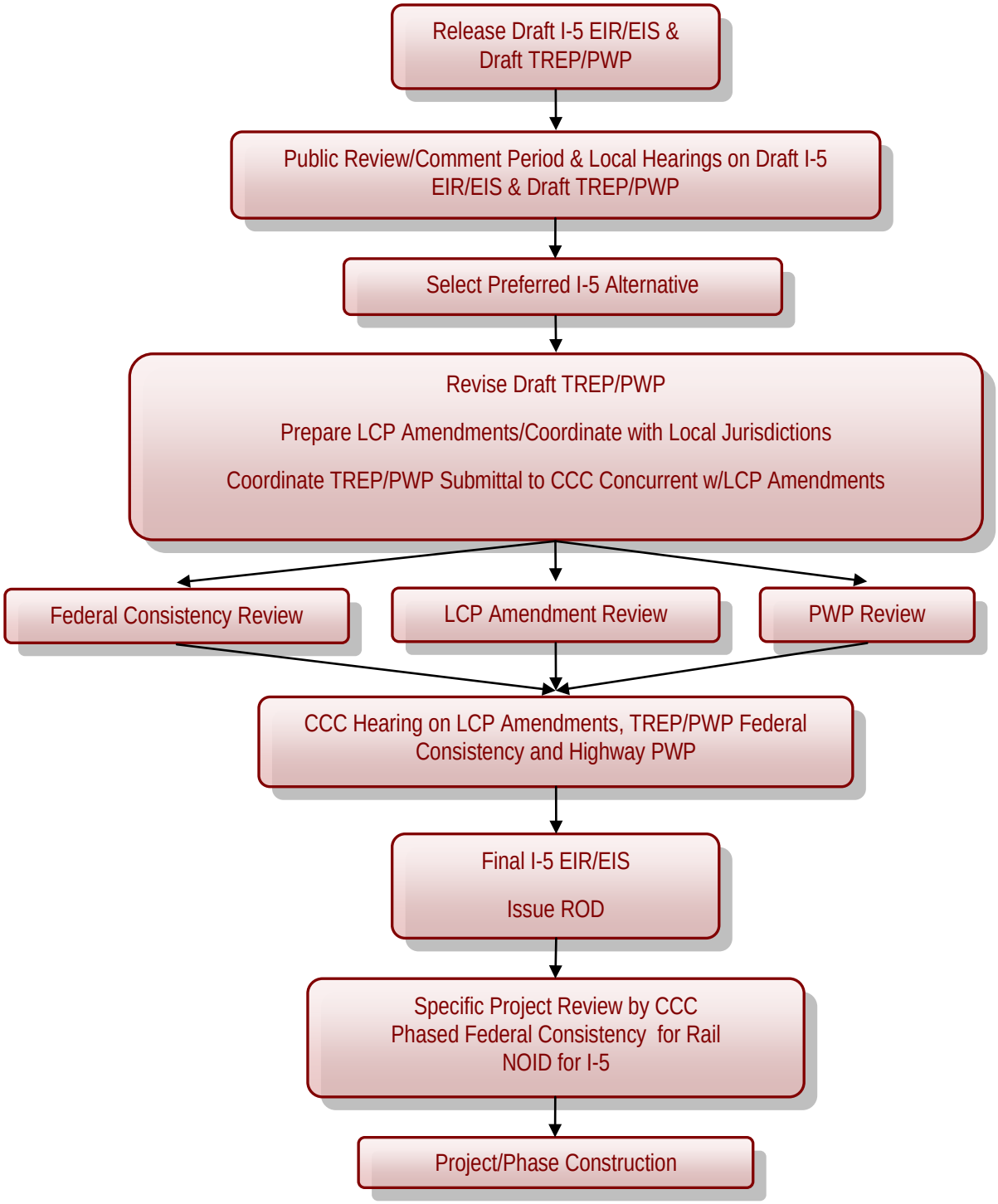
The TREP/PWP proposes to improve and maintain existing public transportation facilities of regional, state, and national significance, including transit, local roadways, highways, pedestrian, and bicycle facilities. The TREP/PWP also includes projects and measures to enhance and restore regionally significant coastal resources. All TREP/PWP program improvements would use public funds for implementation. Therefore, the proposed TREP/PWP and all its program components meet the definition of a public works project.

The TREP/PWP encompasses land area within the coastal zone and includes a comprehensive program for planning and implementing mobility enhancements, public transportation system improvements, and coastal resource enhancements within the cities of San Diego, Del Mar, Solana Beach, Encinitas, Carlsbad, and Oceanside. In addition, the TREP/PWP includes highway and community enhancement improvements within the permit jurisdiction of the Coastal Commission, including portions of existing highway facilities located within lagoons and other areas not subject to a certified LCP. Given the scope of the TREP/PWP program and long-term goals for improving regional mobility and enhancing regionally significant coastal resources, program improvements would cross numerous jurisdictional boundaries and be implemented in phases through 2030 as funds, regional priorities, and transportation and resource benefits and impacts are determined.

Without a PWP, proposed highway improvements and associated community enhancements would be subject to coastal development permit requirements as applied by the Coastal Commission or by the cities of San Diego, Encinitas, Carlsbad, and Oceanside for which the Coastal Commission has certified LCPs. As an alternative to the project-by-project coastal development permit process, implementation of the proposed highway improvements and community enhancements may be achieved pursuant to the PWP process. The PWP allows for efficient and expeditious processing of public works projects by eliminating the need to separately coordinate numerous individual coastal development permits through separate jurisdictions. The proposed highway improvements and community enhancements are alternatively subject to the PWP process, which is intended to provide consistency in review, analysis, processing, and implementation under the authority of the Coastal Commission irrespective of coastal permit jurisdictional boundaries.

The TREP/PWP also presents a comprehensive and integrated plan for reviewing all rail and highway transportation projects and associated community and coastal resource enhancements in the corridor. Because both individual rail and highway projects would be subject to the Coastal Commission Federal Consistency review process, the TREP/PWP provides a comprehensive mechanism for conducting a federal consistency analysis. Figure 1-1 demonstrates the process for approval of the TREP/PWP.

FIGURE 1-1: PROCESS FOR APPROVAL OF TREP/PWP



Federal Consistency Review

Section 307 of the CZMA details the types of activities that require federal consistency review. These include:

> 307(c)(3) (A) After final approval by the Secretary of a state's management program, any applicant for a required Federal license or permit to conduct an activity, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program. At the same time, the applicant shall furnish to the state or its designated agency a copy of the certification, with all necessary information and data. Each coastal state shall establish procedures for public notice in the case of all such certifications and, to the extent it deems appropriate, procedures for public hearings in connection therewith. At the earliest practicable time, the state or its designated agency shall notify the Federal agency concerned that the state concurs with or objects to the applicant's certification. If the state or its designated agency fails to furnish the required notification within six months after receipt of its copy of the applicant's certification, the state's concurrence with the certification shall be conclusively presumed. No license or permit shall be granted by the Federal agency until the state or its designated agency has concurred with the applicant's certification or until, by the state's failure to act, the concurrence is conclusively presumed, unless the Secretary, on his own initiative or upon appeal by the applicant, finds, after providing a reasonable opportunity for detailed comments from the Federal agency involved and from the state, that the activity is consistent with the objectives of this chapter or is otherwise necessary in the interest of national security.
>
> 307(d) Application of local governments for Federal assistance; relationship of activities with approved management programs State and local governments submitting applications for Federal assistance under other Federal programs, in or outside of the coastal zone, affecting any land or water use of natural resource of the coastal zone shall indicate the views of the appropriate state or local agency as to the relationship of such activities to the approved management program for the coastal zone. Such applications shall be submitted and coordinated in accordance with the provisions of *section 6506 of Title 31*. Federal agencies shall not approve proposed projects that are inconsistent with the enforceable policies of a coastal state's management program, except upon a finding by the Secretary that such project is consistent with the purposes of this chapter or necessary in the interest of national security.

A federal consistency certification is required for the proposed TREP/PWP as SANDAG and Caltrans, the agencies initiating TREP/PWP projects, are non-federal agencies and the TREP/PWP program improvements require a number of federal permits, federal authorization, and/or federal funding. In addition, Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), Federal Transit Administration (FTA), Army Corp of Engineers (USACE) and other federal agencies' procedures require the Coastal Commission's concurrence with consistency certification prior to finalizing any Environmental Impact Statement (EIS) and issuance of a Record of Decision (ROD) for highway projects.

Additional review for consistency with the Coastal Act and affected LCPs, as applicable, is required for those components of the TREP/PWP that also are subject to the coastal development permit requirements. TREP/PWP projects subject to both federal consistency review and PWP processing requirements do not include "common carrier rail freight operator" rail projects that improve the movement of freight. These projects fall under Surface Transportation Board (STB) exclusive jurisdiction, and, pursuant to federal law, are exempt from State and local regulatory processes that could foreclose or restrict the railroad's ability to conduct its operation or otherwise unreasonably burden interstate commerce or frustrate or defeat railroad operations. These projects are not exempt,

however, from the Coastal Commission's federal consistency review process to determine consistency with the federally certified CCMP.

Given the integrated nature of the transportation system addressed in the TREP/PWP and the desire to plan and implement corridor-wide transportation system improvements consistent with applicable coastal access, recreation, and resource protection policies, rail projects otherwise exempt from coastal development permit or PWP processing requirements are included in the TREP/PWP to provide a single and consistent mechanism by which to conduct a federal consistency analysis and to ensure the overall NCC program is consistent with Chapter 3 policies of the Coastal Act and certified LCPs, as applicable to the highway and community enhancement projects.

Given the program's level of detail available to evaluate potential coastal resource impacts from rail improvement projects, it is anticipated that federal consistency review for these projects may need to be conducted in a phased manner. This initial federal consistency analysis will ensure that the TREP/PWP vision, goals, and objectives for the overall transportation system improvements, including specific rail projects, are consistent with applicable CCMP/Coastal Act policies. Project-specific review of the rail projects will not occur until project alternatives are chosen; preliminary design, engineering, and resource impact analyses have been developed; and mitigation measures and monitoring plans have been prepared and analyzed for consistency with CCMP/Coastal Act policies. Thus, federal consistency review contained herein for specific rail improvement projects includes discussion and analysis of conceptual plans, and preliminary resource impacts, and mitigation measures. As these projects are further developed, additional federal consistency review will be conducted. Further, should modifications to project design and/or changes within the project area create the potential for resource impacts not considered during federal consistency review and certification, additional federal consistency review would be required. Policies contained in Chapter 3 of the Coastal Act provide the standard of review to determine federal consistency for TREP/PWP program improvements. An LCP that the Coastal Commission has effectively certified and incorporated into the CCMP may provide guidance for analyzing project consistency with Chapter 3 policies where the LCP includes development standards applicable to the project area. In cases where the Coastal Commission has not incorporated a certified LCP into the CCMP, the LCP can be used to provide background information but is not used as guidance in analyzing project consistency with Chapter 3 policies.

LCP Amendments

Section 30605 of the Coastal Act states in pertinent part:

> If any plan for public works or state university or college development project 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 Title 14, Section 13356 of 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 and Section 13357 of the Code of Regulations 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 Coastal Commission only if it finds, after full consultation with the affected local government(s), that it is

in conformity with the certified LCP. Within the corridor, there are four cities with fully certified LCPs that would be affected by proposed PWP improvements: San Diego, Encinitas, Carlsbad, and Oceanside (highway PWP improvements would not be located within Del Mar and Solana Beach does not yet have a certified LCP). Therefore, pursuant to Section 30605 of the Coastal Act, the standard of review for portions of the NCC improvements occurring in these cities, which excludes rail projects under the jurisdiction of the STB, is that the proposed PWP is in conformance with the certified LCP of each respective city. Exceptions to this standard include properties within the certified cities that are located in areas of deferred certification (e.g., areas where an LCP has yet to be certified). The standard of review for PWP improvements occurring in areas of deferred certification and within Solana Beach, which does not yet have a LCP, is that the PWP is consistent with Chapter 3 policies of the Coastal Act. In addition, a number of the proposed PWP improvements would span the lagoons in the corridor and result in projects that would be under both Coastal Commission and city jurisdiction, as defined by lagoon tidelands, areas subject to the public trust, and areas subject to the applicable certified LCP.

In cases where PWP improvements are inconsistent with an applicable LCP, the Coastal Act allows agencies authorized to undertake a public works project to request an LCP amendment to ensure consistency. Section 30515 of the Coastal Act provides:

> Any person authorized to undertake a public works project or proposing an energy facility development may request any local government to amend its certified local coastal program, if the purpose of the proposed amendment is to meet public needs of an area greater than that included within such certified local coastal program that had not been anticipated by the person making the request at the time the local coastal program was before the commission for certification. If, after review, the local government determines that the amendment requested would be in conformity with the policies of this division, it may amend its certified local coastal program as provided in Section 30514.
>
> If the local government does not amend its local coastal program, such person may file with the commission a request for amendment which shall set forth the reasons why the proposed amendment is necessary and how such amendment is in conformity with the policies of this division. The local government shall be provided an opportunity to set forth the reasons for its action. The commission may, after public hearing, approve and certify the proposed amendment if it finds, after a careful balancing of social, economic, and environmental effects, that to do otherwise would adversely affect the public welfare, that a public need of an area greater than that included within the certified local coastal program would be met, that there is no feasible, less environmentally damaging alternative way to meet such need, and that the proposed amendment is in conformity with the policies of this division.

Pursuant to Section 30515 of the Coastal Act, as implemented by Section 13666 of the Code of Regulations, and with a concurring preliminary determination of the executive director of the Coastal Commission, SANDAG and Caltrans are authorized and have the option to file an LCP amendment with the Coastal Commission for the NCC PWP. This would provide the planning mechanism for implementing the specific public improvement projects proposed in the PWP. Where the NCC PWP projects necessitate an amendment to a certified LCP to incorporate map changes or revisions to land-use policies and development standards, the standard of review is the Chapter 3 policies of the Coastal Act. The review standard for proposed changes to the implementation plan of a certified LCP (i.e., zoning map, zoning designation, and development standard amendments) is that the proposed amendment conforms with and is adequate to implement provisions of the land use plan (LUP) element of the LCP.

Public Works Plan (PWP) Process

Section 30605 of the Coastal Act states in pertinent part:

> …Where a plan for a public works…has been certified by the Commission, any subsequent review by the Commission of a specific project contained in the certified plan shall be limited to imposing conditions consistent with Section 30607 and 30607.1…

Section 30607 further provides:

> Any permit that is issued or any development or action approved on appeal, pursuant to this chapter, shall be subject to reasonable terms and conditions in order to ensure that such development or action will be in accordance with the provisions of this division.

Sections 30605 and 30607 of the Coastal Act establish that the standard of review for specific public works projects approved by the Coastal Commission as part of a PWP is that such projects are consistent with the approved PWP. Sections 30605 and 30607 also provide that the Coastal Commission's subsequent review of projects submitted pursuant to a certified PWP is limited to imposing conditions intended to ensure the projects are carried out consistent with the certified PWP; such projects do not require coastal development permits.

Consistency determinations are made by the Coastal Commission and are subject to public review and comment. Sections 30605 and 30606 of the Coastal Act and Title 14, Section 13359 of the California Code of Regulations govern the Coastal Commission's review process for development proposed pursuant to a certified PWP. Section 30606 of the Coastal Act requires the public agency proposing the public works project provide a NOID to the Coastal Commission (and other interested parties, organizations and governmental agencies), and provide data demonstrating the project is consistent with the certified PWP. Once a NOID is deemed complete, it is scheduled for public hearing and the Coastal Commission determines whether the project is included in the certified PWP and whether conditions are required to bring the project into conformance with the approved PWP. No construction is permitted until the Coastal Commission finds the proposed project is consistent with the certified PWP. In the event that a proposed project is found inconsistent, the agency proposing the public works project may choose to submit a coastal development permit application to the appropriate permitting agency or amend the PWP to include the specific project proposal. Chapter 6 of this TREP/PWP describes in more detail the NOID and PWP amendment process including submittal requirements, regulatory thresholds, and review procedures.

The NCC TREP/PWP also incorporates an administrative process for operational projects and/or activities that do not require a NOID or TREP/PWP amendment but which constitute development under the Coastal Act. The administrative process is intended to facilitate the approval of projects and/or activities that are minor in nature and required for ongoing repair and maintenance of facilities. Chapter 6 addresses the types of activities covered by this administrative process and describes those activities that must include notice and opportunity to comment by the Coastal Commission, as well as those which require notice only and may be implemented without discretionary Coastal Commission review.

Environmental Review

Section 30605 of the Coastal Act allows PWPs to be submitted to the Coastal Commission for review in the same manner prescribed for the review of LCPs as set forth in Chapter 6 (commencing with Section 30500 of the Coastal Act). Section 21080.5 of the California Environmental Quality Act (CEQA) exempts local governments from requiring preparation of an Environmental Impact Report (EIR) in connection with preparing LCPs. Rather, CEQA compliance responsibilities are assigned to the Coastal Commission's LCP review and approval process, which has been found by the Secretary of the Resources Agency to be functionally equivalent to the EIR process.

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

Section 21080.5(a) of CEQA, Section 30605 of the Coastal Act and Title 14, and Section 13355 of the Coastal Commission Regulations require PWPs to include environmental information sufficient in detail to enable the Coastal Commission to determine the consistency of the plan with the policies of the Coastal Act or LCP, as applicable. Consistent with these requirements, Caltrans and the FHWA have prepared the *Interstate 5 North Coast Corridor Project (I-5 NCC Project)* Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (June 2010) to examine the potential environmental impacts of the highway alternatives being considered.

In addition, the FRA and Caltrans, as federal and state lead agencies, prepared the *Los Angeles to San Diego (LOSSAN) Final Program EIR/EIS* (September 2007) for the proposed rail corridor improvements. This document provides an analysis of alternatives and discloses potential environmental effects and benefits of the proposed rail program and its alternatives. Given the level of analysis in the Program EIR/EIS for the LOSSAN Improvement Project, decisions to advance and construct the proposed rail improvements may require additional environmental review under NEPA and additional, phased federal consistency review under the CZMA.

2.0 CONTEXT

2.1 POLICY CONTEXT: REGIONAL SUSTAINABILITY EFFORTS

The corridor vision encompasses a balanced, integrated approach that would implement transportation solutions for both the I-5 and LOSSAN rail corridors, as well as create unique resource enhancement opportunities as part of the transportation improvements. Protection and enhancement of coastal resources and improved mobility are necessary to achieve the regional and corridor transportation system visions, to improve the quality of life in the coastal communities, and to ensure continued use and enjoyment of coastal resources for the millions of people who live near and visit the corridor each year.

The region utilizes and promotes the sustainability programs, policies and strategies described in this section to develop an integrated approach to solving potentially conflicting goods movement and transportation and resource protection issues both within and outside the North Coast Corridor (NCC). The current deficiencies in the transportation system can generally be attributed to the following:

- **Continued population growth** due to longer lifespans and increased birthrates, coupled with less outward migration than forecasted. From 1970 to 2006, San Diego County more than doubled in population to over 3 million residents. Further, growth is not only occurring in the NCC, but throughout those regions served by the I-5 and LOSSAN corridors, including Orange County and Riverside County to the north, Imperial County to the east, and Baja California, Mexico to the south. Travel demand in the corridor has largely been driven by population and housing growth. Developable land has become scarce within the travel shed and more people have had to commute further for employment.
- **Limited revenue** for implementation of numerous regional transportation needs. Despite the increase in transportation demand, transportation funding has not kept pace. In addition, the purchasing power of the traditional funding sources such as the gasoline tax has been reduced over time because of increased fuel efficiency and rising construction costs. The region must continually seek cost effective strategies that are balanced with community impacts and other quality of life standards, as well as integrated with land use decisions.
- **Regional goals of livability and sustainability** require a healthy economy, improved and efficient mobility, and reliable transportation systems. Focusing transit investments in areas with land uses that support an efficient transit system discourages sprawl by implementing projects in urban and suburban areas and not open space or rural areas, thereby limiting impacts to natural resources.
- **NCC is part of a regional system** requiring solutions that are complementary to other corridors and communities outside of the region and the coastal zone. The feasibility of new solutions is at least partially affected by historical decisions that dictated the location, extent, use and demands on the existing and planned transportation facilities. For example, I-5 was originally built as an eight-lane freeway in the 1960s and 1970s and has not had any major improvements since then to keep pace with the corridor's significant population, employment, and travel-demand growth over the last 40 years. Within the region through 2050, it is forecasted that 56% of new residences and 42% of new jobs will be located within a 10-minute walk of high-frequency transit stations. The development of new, multi-modal transportation facilities is necessary to meet these future demands.[1]

[1] *2050 Regional Growth Forecast*, SANDAG, February 2010.

SANDAG is responsible for developing the planning framework to integrate the region's land use and transportation system, and for managing regional growth while preserving natural resources and sustaining economic prosperity. The Regional Comprehensive Plan (RCP), adopted in July 2004, provides this planning framework upon which local and regional decisions can be made to move the region towards a sustainable future. The RCP focuses on Smart Growth opportunities. Smart Growth focuses housing and jobs within urban areas that are served by a multi-modal transportation system, which in turn reduces urban sprawl and preserves open space, agricultural and natural resource areas. Smart Growth will also advance the region's goals of mitigating global climate change, including air emissions, sea level rise and shoreline erosion.

The proposed TREP/PWP, associated *I-5 NCC Project Draft EIR/EIS* (June 2010), and *San Diego NCC-CSMP* (July 2010) utilize land use and growth projections from the adopted 2030 Regional Transportation Plan (RTP), which is the current blueprint for a transportation system in the region. However, a 2050 Regional Growth Forecast was adopted by the SANDAG Board of Directors in February 2010 that further demonstrates and supports the need for improved and efficient multi-modal transportation options to meet forecast growth and transportation demands in the region and beyond.

The 2050 Regional Growth Forecast is one of the first steps in developing the 2050 RTP, and it will inform the development of the region's first Sustainable Communities Strategy (SCS), a new component of the 2050 RTP developed pursuant to California Senate Bill 375 (SB 375) (Chapter 728, Statutes of 2008), which includes the Regional Housing Needs Assessment (RHNA). In addition, the forecast information will be used to evaluate future applications for the region's Smart Growth Incentive Program and to support local capital improvement and water resource planning throughout the region. This forecast complies with all applicable statutes and regulations regarding the 2050 RTP, SCS, and RHNA from SB 375 and the California Transportation Commission Draft RTP Guidelines. The 2050 Regional Growth Forecast provides a starting point for regional planning. The forecast is not intended to be a prescription for future growth. Rather, the forecast is intended to show anticipated future development patterns, based on regional projections and local input.

Based on the land use inputs received from local jurisdictions, and predictions of likely development patterns in the future, the region can expect approximately 50% of future job and housing growth to occur in Smart Growth Opportunity Areas, defined as locations in the region that can support future growth and infill development close to jobs, services, transit and public facilities to maximize the use of existing infrastructure and preserve open space and natural resources. In addition, this forecast projects that more than 70% of future job and housing growth will likely occur within Transit Investment Areas, defined as being the area with highest priority for future transit investments.[2]

After 40 years of growth; changes in travel patterns, surrounding land use, travel demand, and transportation funding availability; the importance of the regional transportation systems at the local, regional, and national levels; and the importance of addressing other aspects of "quality of life", a new vision for the NCC travel shed has been developed. The new vision is reflected within the proposed TREP/PWP as it seeks to maximize utilization of existing facilities, move more people (not just vehicles), provide reliable transportation options, improve coastal access and natural resources, provide a flexible foundation for further improvements, and to integrate transportation with land use and activity centers.

As discussed further below, SANDAG works with local governments on a variety of sustainable programs for the benefit of the entire region. The TREP/PWP program would further the goals of

[2] *2050 Regional Growth Forecast*, SANDAG, February 2010.

multiple ongoing and proposed regional sustainability efforts aimed at reducing energy consumption and associated air emissions, facilitating Smart Growth and multimodal transportation, and improving and protecting the area's unique coastal resources.

2.1.1 Reducing Regional Energy Consumption and Air Emissions

2.1.1.1 SANDAG Climate Action Strategy

Approved in March 2010, the Climate Action Strategy is SANDAG's guide to climate change policy. Recognizing that many climate change solutions and impacts occur at regional and local levels, the Strategy identifies a range of potential policy measures—"tools in the toolbox"—for consideration as SANDAG updates long-term planning documents like the RTP and RCP and as local jurisdictions update their General Plans and other community plans.

A primary focus of the Climate Action Strategy is to help SANDAG identify land use, transportation, and related policy measures and investments that could help SANDAG and local governments achieve greenhouse gas reductions from the on-road transportation sector, including measures to reduce greenhouse gas emissions from passenger cars and light-duty trucks as required in future updates of the RTP. This focus of the Climate Action Strategy is organized around four goals, some coupled with a specific set of objectives, intended to reduce transportation-related greenhouse gas emissions at regional and local levels and help the region prepare for potential impacts to the transportation system:

1. **Reduce Total Miles of Vehicle Travel**

   Objectives

   - Build Smart Growth Neighborhoods and Communities in which Basic Daily Needs and Public Transit Service are Safely Accessible on Foot or by Bicycle
   - Expand and Develop New Systems for Low Carbon Modes of Transportation
   - Reduce Demand for Single Occupancy Vehicle Travel

2. **Minimize Greenhouse Gas Emissions When Vehicles Are Used**

   Objectives

   - Reduce Traffic Congestion
   - Promote Efficient Driving Practices

3. **Support Increased Use of Low Carbon Alternative Fuels**
4. **Protect Transportation Infrastructure from Climate Change Impacts**

   Objectives

   - Protect Transportation Infrastructure from Damage Due to Extreme Heat
   - Protect Transportation Infrastructure from Sea Level Rise and Higher Storm Surges
   - Protect Transportation Infrastructure from Wildfire- Associated Mudslides

Potential policy measures also are identified for improving efficiency in buildings and energy use, protecting transportation and energy infrastructure from climate impacts, and helping SANDAG and local jurisdictions reduce greenhouse gases from their operations. Decisions on which measures to pursue will be considered by regional and local officials, stakeholders, and the public during development of subsequent public policy documents (and related regulatory mechanisms).

2.1.1.2 SANDAG Regional Energy Strategy Update

Approved in December 2009, the updated Regional Energy Strategy (RES) provides information, goals, and policy measures for a comprehensive set of energy issues. Many of the measures identified in the following issue areas would reduce greenhouse gases upon implementation:

- Energy Efficiency and Conservation
- Renewable Energy
- Distributed Generation
- Energy and Water
- Peak Demand
- The Smart Grid
- Natural Gas Power Plants
- Transportation Fuels
- Land Use and Transportation Planning
- Border Energy
- Clean Energy Economy

Although there is overlap between the energy policy guidance provided in the RES and the types of policy measures that would reduce GHG emissions addressed in the Climate Action Strategy, energy and climate change are not synonymous issues. As a result, SANDAG prepared the Climate Action Strategy to accompany the RES to provide regional policy guidance on climate change and energy issues, respectively.

In light of significant state control over energy policy in certain areas like electricity and natural gas, the RES focuses on the opportunities and authority that SANDAG and its member agencies have to address energy issues and achieve both local and regional goals related to energy and climate change. SANDAG anticipates addressing energy considerations through future updates of the RCP and RTP, while local governments can use mechanisms like their General Plans and by participating in the SANDAG Energy Roadmap program. The RES identifies six core strategies that, if implemented, would help the region significantly in meeting its energy and climate change mitigation goals. The following strategies are ones that SANDAG and local governments could play an integral role in implementing.

1. Pursue a comprehensive building retrofit program to improve efficiency and install renewable energy systems.
2. Create financing programs to pay for projects and improvements that save energy.
3. Utilize the SANDAG-San Diego Gas & Electric Local Government Partnership funding to help local governments identify opportunities and implement energy savings at government facilities and throughout their communities.
4. Support land use and transportation planning strategies that reduce energy use and greenhouse gas emissions.
5. Support planning of electric charging and alternative fueling infrastructure.
6. Support use of existing unused reclaimed water to decrease the amount of energy needed to meet the water needs of the San Diego region.

2.1.1.3 Caltrans Climate Action Program

The Climate Action Program developed by the Caltrans is an interdisciplinary effort intended to promote, facilitate, and coordinate implementation of climate change strategies and related activities within Caltrans and with partner agencies. The Climate Action Program serves as a resource for technical assistance, training, information exchange, and partnership-building opportunities.

The program focuses on both reducing GHG emissions and adapting to climate change. The overall objective is to balance progressive program delivery within the context of responsible environmental stewardship in a way that 1) allows transportation strategies, plans, and projects as a whole to contribute to the State's GHG emission reduction plan; 2) provides guidelines, procedures, performance measures, and a quantifiable set of reporting protocols to monitor GHG footprints; 3) considers potential impacts of climate variability on transportation system and development of risk assessment for long lasting transportation investments; and 4) advances applied research to support climate change knowledge base in transportation.

2.1.2 Smart Growth Opportunities, Multi-Modal Transportation, and Economic Sustainability

2.1.2.1 Regional Comprehensive Plan Smart Growth Opportunity Areas

The RCP provides a vision for the region based on Smart Growth and sustainability. A key implementation action of the RCP has been the development of a "Smart Growth Concept Map" illustrating the location of existing, planned, and potential Smart Growth areas and providing the framework for several significant SANDAG programs.

In July 2008, SANDAG prepared an updated Smart Growth Concept Map for the region (the initial map was accepted in 2006). The map, shown in FIGURE 2-1, contains almost 200 locations in seven Smart Growth categories identified in the RCP. The seven Smart Growth "place types" include the Metropolitan Center, Urban Centers, Town Centers, Community Centers, Rural Villages, Mixed Use Transit Corridors, and Special Use Centers. The Metropolitan Center category includes the region's primary business, civic, commercial, and cultural centers such as Downtown San Diego, whereas Urban Centers are subregional employment and cultural centers such as UTC. Town Centers are suburban downtowns within the region, and Community Centers are areas with housing within walking/ biking distance of transit stations. A Rural Village category includes distinct communities within the unincorporated areas of San Diego County. Mixed Use Transit Corridors are areas with concentrated residential and mixed-use development along a linear transit corridor, while Special Use Centers are employment areas consisting primarily of medical or educational facilities.[3] Each Smart Growth place type is defined by a graduated threshold of land use intensity and public transit service.

Smart growth developments generate fewer auto trips than traditional land use patterns, and result in less demand for parking as compared to conventional residential and commercial developments due to an increased number of trips via transit, walking, or bicycling.[4] The specific Smart Growth locations identified on the map allow transportation agencies, transit operators, utility agencies, lenders, developers, and others to focus coordinated infrastructure investments and services in these areas. This in turn helps reduce development pressure on open space and rural areas.

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[3] *Smart Growth in the San Diego Region*, SANDAG, 2008.

[4] *Smart Growth Toolbox: Smart Growth Trip Generation/ Parking Study*, SANDAG. http://www.sandag.org/index.asp?projectid=334&fuseaction=projects.detail, accessed May 2010.

To better connect land use and transportation, the map was used in the update of the 2030 RTP to guide the planning and development of the region's future transit networks, and provide higher priority for peak period transit services that link Smart Growth areas to one another and to other major activity centers. In addition, the Smart Growth place types were incorporated into the point structure of the SANDAG Transportation Project Evaluation Criteria that are used to prioritize funding for regional transportation projects. As a result, Smart Growth areas will receive higher priority for transportation improvements, lending additional support to the Smart Growth principles contained in the RCP.

The map also identifies the region's habitat preserve planning areas, providing a framework for the continued preservation of open space and natural resources. In addition, the map is used to determine eligibility to participate in the region's long-term Smart Growth Incentive Program,[5] which is funded through *TransNet*, the region's half-cent local sales tax.

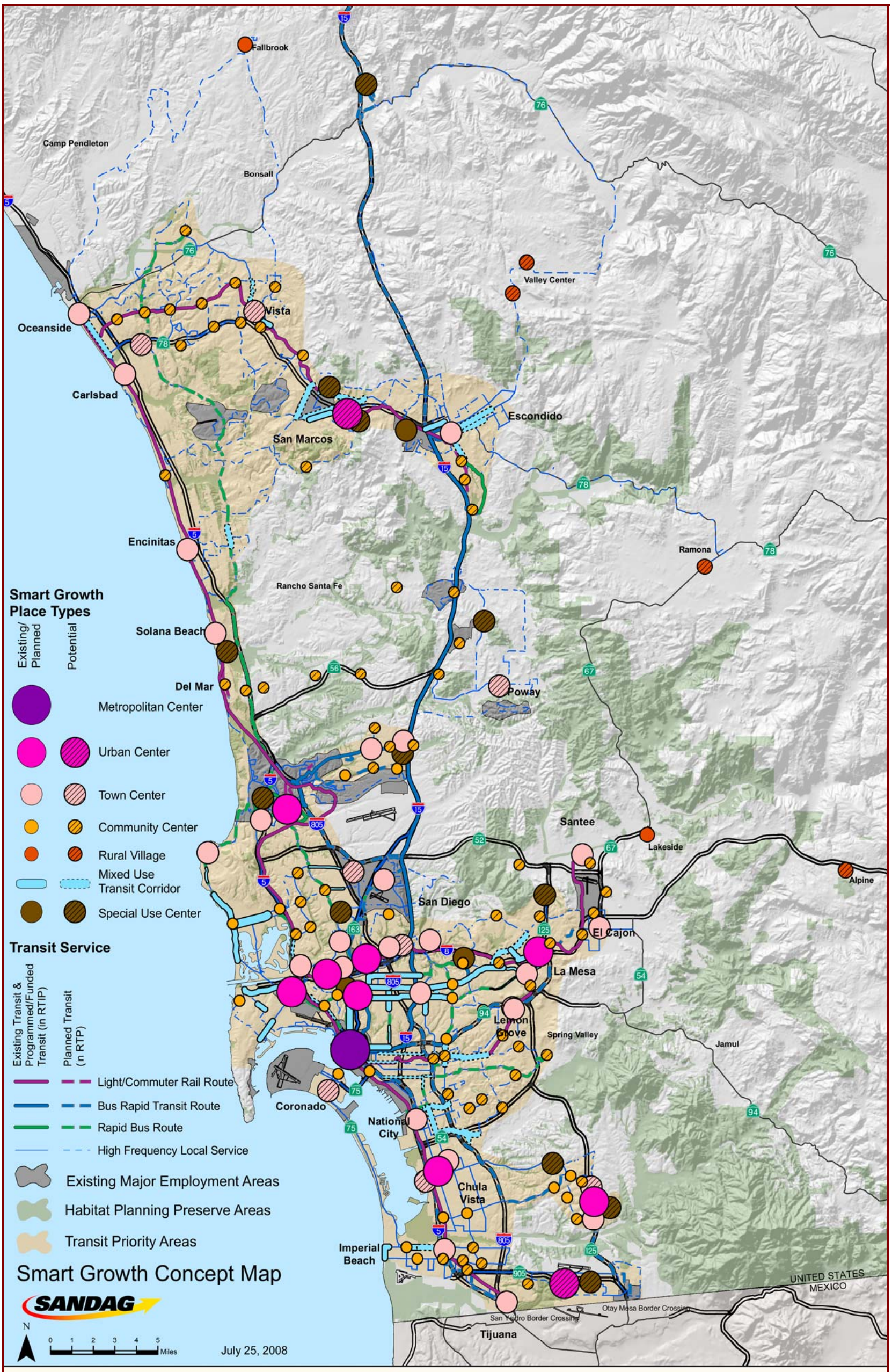
2.1.2.2 SANDAG 2030 Regional Transportation Plan

SANDAG is responsible for planning the region's transportation system, programming funding for project implementation, and directly or collaboratively implementing transit, highway and rail-corridor infrastructure improvements. SANDAG's 2030 RTP and Final EIR, approved November 30, 2007, is the region's current blueprint for a transportation system to enhance the quality of life for residents and meet the mobility needs of those who live, work, visit, and do business in San Diego County. While the RTP has a planning horizon of 2030, its policies, plans, and projects were developed to provide for the ongoing success of the San Diego region. The foundation for the 2030 RTP lies in better connecting freeways, transit, and road networks to homes, schools, workplaces, shopping centers, recreational areas, and other activity centers in a manner that promotes environmental stewardship and sustainability through the protection and enhancement of open space and natural environments. The RTP was developed around seven policy goals:

- **Livability** – Promote livable communities
- **Mobility** – Improve the mobility of people and freight
- **Efficiency** – Maximize the efficiency of the existing and future transportation system
- **Accessibility** – Improve accessibility to major employment and other regional activity centers
- **Reliability** – Improve the reliability and safety of the transportation system
- **Sustainability** – Minimize effects on the environment
- **Equity** – Ensure an equitable distribution of the benefits among various demographics and user groups

[5] The *TransNet* Smart Growth Incentive Program funds transportation and transportation-related infrastructure improvements and planning efforts that support and facilitate compact, mixed use development focused around public transit, and that will increase housing and transportation choices. The program will award 2% of the annual *TransNet* revenues (approximately $4.8 million in FY 2009) over the next 40 years to local governments through a competitive grant program to support projects that will help better coordinate transportation and land use in the San Diego region.

FIGURE 2-1: SAN DIEGO REGIONAL COMPREHENSIVE PLAN SMART GROWTH CONCEPT MAP



All Smart Growth Opportunity Areas shown on the map have been identified and recommended for inclusion on the map by local jurisdictions

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The policy goals of the RTP were developed and will be implemented in four main components:

- **Land Use.** "Transportation infrastructure and services must be coordinated with land use planning if we are to avoid increased traffic congestion, reduced mobility, and a deteriorating quality of life."
- **Systems Development.** " … provides regional transportation improvements, viable travel choices, and connections to our daily activities."
- **Systems Management.** " … helps to maximize system operations so that we make the best use of our existing transportation resources and provide travelers with real-time travel information to assist them in making informed travel choices."
- **Demand Management.** " … reducing trips on the transportation system during peak periods and encouraging alternatives to driving alone (e.g., transit, carpooling, vanpooling, biking, and walking)."

The key goals supporting a comprehensive transportation vision in the NCC, including the purpose and vision for transit, highway, bicycle and pedestrian projects, focus on providing:

- ***More travel choices*** for all travelers on a multi-modal transportation system that accommodates commuter rail, intercity rail, goods movement, bicycles, pedestrians, carpools, and transit as well as SOVs.
- ***Shorter travel times*** by providing additional capacity with a focus on moving people, instead of vehicles, along existing highway and transit facilities to keep pace with increasing demand and, thus, to avoid increases in congestion.
- ***More reliable travel times*** by addressing existing rail bottlenecks and operational conflicts and incorporating facilities and services that give priority to carpools and transit, allowing these modes to bypass congestion.
- ***Better coordination of transportation with land use*** to encourage growth in existing developed areas, to minimize adverse environmental impacts, and to preserve open space and natural habitats.

The adopted RTP calls for more than $57 billion ($42 billion was identified in the revenue constrained alternative) for transportation investments through 2030. The types of transportation investments identified in the RTP and their relationship with local Smart Growth will greatly influence the transportation choices people make to reach jobs, services and recreation, including driving alone, walking, bicycling, taking public transit, and carpooling.

Multiple NCC program projects are important elements of the 2030 RTP. The RTP identifies projects or project types to be developed through 2030 based on assumptions for funding availability. NCC projects included in the Revenue Constrained Scenario (funding anticipated through existing local, state and federal funding sources) and the Reasonably Expected Revenue Scenario (funds from existing funding sources plus new funds that can be reasonably expected based on anticipated policies, actions or programs) are identified in Table 2-1.

TABLE 2-1: SANDAG REGIONAL TRANSPORTATION PLAN PROJECTS (NORTH COAST CORRIDOR)

Project	Revenue Constrained Scenario	Reasonably Expected Revenue Scenario
Coastal Tunnels	$475M (Del Mar only)	$1,004M (Del Mar, UTC)
Coastal Rail Double Tracking**	$1,350M	$1,350M
Transit Parking Structures**	$693M	$735M
Regional Rail Grade Separations**	$363M	$671M
Improved/New Major Transit Stations and Centers**	$519M	$603M
Arterial BRT Transit Priority Improvements**	$395M	$395M
I-5: La Jolla Village Dr to I-5/I-805 Merge (8F/14F+2HOV)	$160M	$160M
I-5: I-5/I-805 Merge to Vandegrift Boulevard (8F/14F+4ML)	$2,240M	$2,740M
I-5: I-805 to SR 56 (widen to 14F)	$186M	$186M
I-5 to SR 56 Connector	$185M	$185M
I-5 to SR 78 Connector	$200M	$200M

Source: *2030 San Diego Regional Transportation Plan – Pathways to the Future*, SANDAG, November 2007.

F = Freeway Lanes ML = Managed Lanes (HOV/Value Pricing) HOV = High Occupancy Vehicle Lanes

** Projects will take place within the SANDAG region. Some but not all will be located within the NCC.

2.1.2.3 SANDAG 2050 Regional Transportation Plan

SANDAG is currently preparing the 2050 RTP, which is anticipated to be adopted by the SANDAG Board in July 2011. The 2050 RTP would continue to promote the vision for an enhanced quality of life for residents and visitors by balancing economic prosperity, efficient land use and development patterns, and regional access and mobility with preservation of the region's natural environment and resources. Following is SANDAG's adopted vision statement for the 2050 RTP:

> A transportation system that supports a prosperous economy, promotes a healthy and safe environment, including climate change protection, and provides a higher quality of life for all San Diego residents. The transportation system should better link jobs, homes, and major activity centers; enable more people to walk, bike, and use transit; efficiently transport goods; and provide fast, convenient, effective transportation options for all people.

The 2050 RTP vision is supported by several goals that fall into two overarching themes:

- Quality of Travel and Livability
- Sustainability

These goals and related proposed policy objectives are shown in Table 2-2. Highlights include:

- Enhancing mobility by expanding travel choices, including transit, ridesharing, walking and biking options, in addition to single occupant auto travel
- Ensuring a reliable transportation system and travel times by improving traffic flow, reducing bottlenecks, providing facilities that allow for consistent travel times and commensurate improvement of access to recreational destinations as well as general mobility.
- Developing transportation improvements that respect and enhance the environment and result in sustainable communities

TABLE 2-2: SANDAG 2050 REGIONAL TRANSPORTATION PLAN GOALS AND PROPOSED POLICY OBJECTIVES

Goal	Proposed Policy Objectives
QUALITY OF TRAVEL AND LIVABILITY	
Mobility – The transportation system should provide for convenient travel options for people and goods and maximize its productivity. The system should reduce both the time it takes to travel as well as the total costs of travel.	• Tailor transportation improvements to better connect people with jobs and other activities • Provide convenient travel choices including transit, intercity and high-speed trains, driving, ridesharing, walking, and biking • Preserve and expand options for regional freight movement • Increase the use of transit, ridesharing, walking and biking in major corridors and communities • Provide transportation choices to better connect the San Diego region with Mexico, neighboring counties, and tribal nations
Reliability – The transportation system should be reliable so that travelers can expect relatively consistent travel times from day-to-day for the same trip by mode(s).	• Employ new technologies to make travel more reliable and convenient • Manage the efficiency of the transportation system to improve traffic flow
SUSTAINABILITY	
System Preservation & Safety – The public's investment in transportation should be protected by maintaining the transportation system. It is critical to preserve and ensure a safe regional transportation system.	• Keep the region's transportation system in a good state of repair • Reduce bottlenecks and increase safety by improving operations • Improve emergency preparedness within the regional transportation system
Social Equity – The transportation system should be designed to provide an equitable level of transportation services for all populations.	• Create equitable transportation opportunities for all populations regardless of age, ability, race, ethnicity, or income • Ensure access to jobs, services, and recreation for populations with fewer transportation choices
Healthy Environment – The transportation system should lead to environmental sustainability and foster efficient development patterns that optimize travel, housing, and employment choices and encourage future growth away from rural areas and closer to existing and planned development.	• Develop transportation improvements that respect and enhance the environment • Reduce greenhouse gas emissions from vehicles and continue to improve air quality in the region • Make transportation investments that result in healthy and sustainable communities
Prosperous Economy – The transportation system should play a significant role in raising the region's standard of living.	• Maximize the economic benefits of transportation investments • Enhance the goods movement system to support economic prosperity

Source: SANDAG Board of Directors Meeting. Agenda Item 3. 2050 Regional Transportation Plan: Goals and Proposed Policy Objectives. December 4, 2009.

Sustainable Communities Strategy

The SCS is a new element of the 2050 RTP, required by SB 375. It will show how regional greenhouse gas targets, as established by the California Air Resources Board, will be achieved through feasible development patterns, transportation infrastructure investments, and/or transportation measures or policies. If the SCS does not meet regional greenhouse gas targets, an alternative planning strategy must be developed that demonstrates what alternative and additional measures would need to be taken in order for the region to meet its target.

Urban Area Transit Strategy

The Urban Area Transit Strategy is another new component of SANDAG's 2050 RTP being developed to meet and incorporate the requirements of SB 375. The primary goal of the strategy is to develop and implement a world class transit system for the San Diego region in 2050. Other key goals include:

- Significantly increasing the attractiveness and use of transit, walking, and biking in existing transit investment areas and the downtown trolley ring (study area);
- Making transit time-competitive with automobile travel;
- Maximizing the role of transit within the transportation system; and
- Reducing vehicle miles traveled and GHG emissions in the region.

Public and stakeholder input is being sought to identify and evaluate three transit network alternatives utilizing a three-pronged approach to (1) identify key corridors and communities that have the most potential for transit investments, (2) develop transit mode share goals (ranges) for each corridor/community, and (3) use the mode share goals and transit performance criteria to evaluate the alternatives and create a single transit network for incorporation into the 2050 RTP. The SANDAG Board of Directors will ultimately select the regional transit network that will be incorporated into the draft 2050 RTP.

2.1.2.4 San Diego Regional Goods Movement Action Plan

SANDAG developed the Regional Goods Movement Action Plan (GMAP) as part of the 2007 RTP, and is incorporating its preliminary findings in the 2050 RTP. The GMAP identifies and prioritizes the key infrastructure needs to maintain or grow goods movement in the region by providing additional throughput with increased capacity, efficiency, and connectivity.

As a precursor to the GMAP, SANDAG defined a Regional Freight Strategy, which assumed an average annual growth rate of 5% for all freight. The Regional Freight Strategy identified a list of prioritized projects known as the San Diego Regional GMAP based upon objective criteria. The RTP includes actions to pursue funding for GMAP projects not already included in the highway and rail plans.

Actions also are included to ensure the integration and compatibility of the region's freight systems with other regions, local communities, and environmental and quality of life goals. The Regional Freight Strategy proposed a proactive approach to addressing the impacts of goods movement and pursued a regional freight system design that would avoid community, health, and environmental impacts, as well as remove existing impacts wherever possible.

The I-5 and LOSSAN rail corridors are identified within the GMAP list of prioritized projects as key infrastructure needs to serve the NCC and beyond.

2.1.2.5 *TransNet* Smart Growth Incentive Program

Since 1988, *TransNet*, the half-cent sales tax for local transportation projects has been instrumental in expanding the transportation system, reducing traffic congestion, and bringing critical transit projects to life. In 2004, voters chose to extend the half-cent sales tax to 2048. The *TransNet* sales tax extension includes a $280 million Smart Growth Incentive Program (SGIP) to be allocated over 40 years (through 2048). This results in the availability of approximately $5 to $6 million of Smart Growth incentives per year, which can be leveraged with local matching funds or other state and federal funds to augment the total amount of funding available. The RCP specifies that in order to be eligible to compete for these funds, an area must be designated on the Smart Growth Concept Map.

About 45% of the areas on the Smart Growth Concept Map qualify as Existing/Planned Smart Growth areas. The Existing/Planned areas will be eligible to compete for both infrastructure and planning grants from the SGIP. Infrastructure grants could include streetscape or sidewalk enhancements, transit station improvements, traffic calming measures, or other quality of life amenities that support Smart Growth in that area. The remaining 55% of the areas on the map represent potential Smart Growth areas, and are eligible to compete only for planning grants. These planning grants could be used to prepare specific plans, update zoning ordinances, or prepare other plans that provide the institutional framework for Smart Growth development in these areas.

2.1.2.6 *TransNet* Bicycle, Pedestrian, and Neighborhood Safety Program

SANDAG is responsible for the following regional bicycle planning activities:

- Integration of bicycle planning into the RTP;
- Administering funding for the development of bicycle facilities. Primary funding sources are *TransNet*, Transportation Development Act (TDA), Transportation Enhancements (TE), and Congestion Management and Air Quality (CMAQ);
- Encouraging continuity of bicycle facilities across jurisdictional boundaries;
- Supporting programs to encourage a mode shift to bicycling; and
- Providing technical assistance and functioning as an information clearinghouse.

Beginning in Fiscal Year 2009, changes to the Bicycle, Pedestrian, and Neighborhood Safety Program[6] were initiated to provide an additional $4.5 to $5 million per year in funding available for plans and projects, and expanding the program to include a neighborhood safety component. The Bicycle, Pedestrian, and Neighborhood Safety Program will also be responsible for developing the San Diego Regional Bicycle Plan.

2.1.2.7 San Diego Regional Bicycle Plan

The San Diego Regional Bicycle Plan encourages the development of a unified bicycle system throughout the region that serves the needs of all bicycle riders by looking for the best way to provide connections to local and regional activity centers, transit facilities, and regional trail systems. The plan is a component of the RTP which provides overall assistance to local jurisdictions in their efforts to improve the safety of bicyclists, enhance education for bicyclists, and increase awareness about bicycle travel. The final plan was approved by the SANDAG Board of Directors on May 28, 2010.

[6] The Bicycle, Pedestrian, and Neighborhood Safety Program was developed under the TDA and *TransNet* local sales tax program to support bicycle and pedestrian transportation projects in the region through a competitive process on an annual basis.

2.1.2.8 Transportation Enhancement Activities Program

Under the Transportation Enhancement program procedures adopted by the California Transportation Commission, each regional agency may establish its own guidelines for allocating State Transportation Enhancement (TE) funds available to the region.

The SANDAG Board of Directors has decided to focus TE funds on projects that will support Smart Growth development as described in SANDAG's RCP. The criteria under which SANDAG will select TE projects favor those that meet the infrastructure needs of areas with more intense development that are served by regional or corridor transit services.

2.1.2.9 North County Parkway Plan

The North County Parkway Plan is a collaborative effort by the cities of Carlsbad, Del Mar, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego, Caltrans, NCTD, and SANDAG. Since its inception in 2001, as a result of a North County Transportation Summit, these agencies have worked together to identify a list of local arterial and interchange improvement projects to enhance mobility within the North County Parkway Plan area.

At the request of the local agencies, in 2002, SANDAG initiated and has continued to provide staff support for assisting the participating agencies to identify, reach consensus, and rank the list of local arterial and interchange projects. The North County Parkway Plan was completed in December 2006, and included a total of 33 regional arterial project improvements and 11 interchange projects totaling $1.25 billion. The Plan's project list is not intended to serve as the basis for setting regional funding priorities, but provides a basis for helping local agencies direct their local funding revenues. In addition, revenues that may be made available for identified projects include the *TransNet* Local Streets and Roads Program.

2.1.2.10 Mid-Coast Corridor Transit Project

The Mid-Coast Corridor Transit Project proposes to improve public transit services between University City, the University of California, San Diego (UCSD), Old Town and Downtown San Diego, and connect corridor residents with other Trolley lines serving Mission Valley, South County communities stretching to the international border, and East County communities to Santee. As of June 2010, the SANDAG Board has advanced several light rail (LRT) alternatives into the public scoping process for the proposed Mid-Coast Corridor Transit Project. The LRT alternatives consist of various routings that would provide an approximately 11-mile extension to the existing San Diego Trolley system from just north of the Old Town Transit Center to UCSD and University City. Between Old Town and Gilman Drive, the LRT would travel in existing railroad right-of-way owned by the Metropolitan Transit System (MTS). Three stations are proposed in this segment at Tecolote Road, Clairemont Drive, and Balboa Avenue. At Gilman Drive, the LRT alternatives divert from the railroad ROW to serve UCSD and University City.

The University City area has developed as a major employment and high density residential area. Even though University City is considered San Diego's second downtown and UCSD is one of the region's largest trip generators, neither is served by direct or efficient transit. Existing transit to these areas is circuitous, follows congested routes, and is not competitive with individual auto travel.

While the Mid-Coast Corridor Transit Project would not extend north of University City into the NCC region, the 2030 RTP includes realignment of the COASTER Commuter Rail into a proposed tunnel under University City with a potential station at, or in the vicinity of, the proposed Mid-Coast station on Genesee Avenue at University Town Center. Completion of both the Mid-Coast Corridor Transit light

rail and COASTER tunnel projects would enhance direct public access between the NCC and regional residential, employment, and activity centers beyond the NCC, including the Mid-Coast Corridor as well as other areas linked by the LRT system. The planned rail transit connection provided by these two projects would improve travel options to the NCC and enhance NCC coastal access from throughout the region for residents, commuters, and visitors.

2.1.2.11 Transportation Demand Management Program

SANDAG also coordinates a number of transportation demand management (TDM) programs to increase the number of people who carpool, vanpool, ride the bus, Trolley or COASTER, or bike or walk to work. These activities are coordinated through the iCommute program. iCommute is a cost-effective method for easing traffic congestion and reducing air pollution through managing the demand for area roadways by offering a "gateway" of information, resources and tools describing regional TDM and commute options online or through SANDAG's 511 regional transportation information program.

SANDAG works with Caltrans, the San Diego County Air Pollution Control District, transit providers, and the 18 cities and county to implement a multi-faceted TDM Program, which includes carpool partner matching, the Regional Vanpool Program, iCommute Subsidy Program, iCommute Guaranteed Ride Home Program, Regional Bike Locker Program, SchoolPool Program, employer outreach services, and marketing.

Regional Vanpool Program

As part of the TDM Program described above, SANDAG started vanpool services in 1995 with 30 vehicles. Currently, through "RideLink," more than 500 commuter passenger vans travel throughout the region, benefitting from access to carpool and HOV lanes.

RideLink offers a customized matching service to help interested commuters locate existing vanpools that mesh with work schedules and daily routines. Currently, RideLink has a database of approximately 14,000 commuters who are looking for someone to share the ride. New vanpools are created monthly.

RideLink and the San Diego County Air Pollution Control District have teamed up to provide up to a $400 monthly subsidy toward each approved passenger van leased through one of the contracted vanpool vendors. Drivers are offered reasonable month-to-month leases on these vehicles that include maintenance, roadside assistance, and insurance costs. Many vanpool riders pay less than $50 a month to ride in their vanpool.

RideLink's Guaranteed Ride Home Program provides a taxi or rental car, for a minimal co-pay, to ensure that vanpoolers are never stranded during emergencies. Commuters who carpool, bike to work, or use the Commuter Express bus service or COASTER can also take advantage of this program.

2.1.3 Preserving and Enhancing Natural Resources

2.1.3.1 Environmental Mitigation Program

The *TransNet* Extension Ordinance and Expenditure Plan, approved countywide by voters in November 2004, includes an Environmental Mitigation Program (EMP) funding allocation to mitigate habitat impacts of regional transportation projects. The EMP provides for proactive, large-scale acquisition and management of habitat lands for future mitigation before individual transportation projects cause habitat impacts. This creates a reliable approach for funding the required mitigation for future transportation improvements, while at the same time reducing overall costs and accelerating resource enhancement activities and project delivery. *TransNet* will provide EMP funding for the next 40 years in order to mitigate regional and local transportation projects (Biological Mitigation Fund), and

for regional habitat acquisition, management, and monitoring activities (Regional Habitat Conservation Fund). This funding allocation is tied to mitigation requirements and the environmental clearance approval process for transportation projects outlined in the RTP.

In March of 2008, SANDAG entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and Caltrans to formalize a process for implementing early land mitigation for transportation improvements. The MOA is a 10-year processing agreement that will allow SANDAG, Caltrans and the wildlife agencies to evaluate how the EMP implements the provisions of the *TransNet* ordinance for early land mitigation.

The MOA has budgeted for implementation of mitigation over the next 10 years to assist in regional land management and monitoring. The *TransNet* EMP funding (in 2002 dollars) that is specifically programmed for the NCC corridor, allowing for expenditure of the EMP funds with implementation of the NCC transportation projects, includes:

- $173 million for coastal wetland mitigation
- $3 million for freshwater wetland mitigation
- $29 million for upland mitigation

After the first 10 years of the program, a comprehensive analysis will be conducted to quantify the direct cost savings associated with early mitigation. This direct cost savings will be used in the future to continue to assist with the implementation of regional habitat preservation efforts.

Quality of Life Funding Strategy

Because of the lack of available resources at the national and state level to help finance transportation and other regional and local infrastructure needs, regions are increasingly being asked to leverage or match state and federal funds with local money or programs that help fill the infrastructure gaps. The Integrated Regional Infrastructure Strategy (IRIS) is a component of the RCP adopted by the SANDAG Board in July 2004. Developed in response to the need to manage demand for infrastructure services as the region continues to grow, the IRIS provides a framework for better integrating long-range planning with short-term capital expenditures for key region-serving infrastructure areas.

Through a comprehensive infrastructure inventory and evaluation, needs assessment and identification of policy and investment options, the IRIS found that the overall need for infrastructure is greater than available resources. While most of the region's infrastructure providers have a system in place to address these needs and prioritize expenditures, the IRIS identified three regional infrastructure areas that are significantly underfunded and lack dedicated funding streams: habitat conservation, shoreline preservation, and water quality enhancement. Since that time, the SANDAG Board of Directors has also identified public transit operations and maintenance as a fourth infrastructure area meeting these criteria.

In addition, when San Diego County voters approved the extension of the *TransNet* half-cent sales tax in November 2004, the measure requires the SANDAG Board of Directors to "act on additional regional funding measures (a ballot measure and/or other secure funding commitments) to meet long-term requirements for implementing habitat conservation plans in the San Diego region." The current deadline outlined in the *TransNet* Extension Ordinance for meeting this commitment is November 2012 (EMP Principle No. 10, amended November 20, 2009). Because the potential cumulative funding needs of all these quality of life elements are so great, SANDAG has embarked on a regional dialogue to examine quality of life funding priorities and potential funding mechanisms.

2.1.3.2 San Elijo Lagoon Restoration Project (SELRP)

The San Elijo Lagoon Restoration Project seeks to preserve, protect and enhance the San Elijo Lagoon Ecological Reserve and its watershed. To achieve this, a feasibility study was prepared to evaluate alternative actions to restore the habitat functions and values of the lagoon. San Elijo Lagoon is a vital coastal resource in the region as it provides a mechanism for conveyance and dissipation of floodwater, thereby reducing erosion by slowing runoff velocities, deposition of flood suspended sediments, shoreline stabilization, recharge of groundwater, and storage of surface water. San Elijo Lagoon also serves to filter suspended sediments, remove organic and inorganic nutrients, remove toxic substances, facilitate nutrient cycling, denitrification, and mineralization.

Currently, the City of Encinitas, USACE, USFWS, CDFG, County of San Diego, and the San Elijo Lagoon Conservancy are working to complete a Draft EIR/EIS for restoration of the lagoon. This includes restoration of the hydrological regime and the marsh habitat that is being converted from mudflats and low marsh to middle and high marsh. SANDAG/Caltrans have participated with the City of Encinitas and the USACE to determine the optimal bridge opening at I-5 to help facilitate restoration plans for the lagoon. This large regional restoration project could ultimately facilitate the restoration of many hectares of wetlands and help to ensure the lagoon's continued functioning, greatly enhancing the coastal lagoon habitat.

2.1.3.3 Coastal Regional Sediment Management Plan

SANDAG received a grant from the California Department of Boating and Waterways for the development of a Plan to facilitate the management of shoreline sand on a regional basis. The region is one of three areas in the State chosen to prepare a plan. This is part of a statewide program to develop a Sediment Master Plan lead by the Coastal Sediment Management Workgroup, a group of state, federal, and local/regional entities.

The Coastal Regional Sediment Management Plan is a guidance and policy document that describes how management of sediment targeted at coastal erosion can be implemented in an expeditious, cost-effective, and resource-protective manner throughout the region. The goal is to identify sediment sources that can be used to restore and maintain coastal beaches and other critical areas of sediment deficit or excess, reduce the proliferation of protective shoreline structures, sustain recreation and tourism, enhance public safety, and restore coastal sandy habitats through a consensus-driven process.

While total loads of sediment reaching the ocean have been decreasing, a disproportionate amount ends up trapped in coastal wetlands, due to factors related to urbanization such as unstable inlets, decreased tidal prisms, and ecosystem fragmentation. Routine maintenance dredging is required at most lagoons and harbors in the region and sediment placement at beaches provides a beneficial reuse of suitable maintenance dredged materials. Healthy beaches are important for maintaining the integrity of the wetland systems existing behind them. Habitat quality may affect managed or sensitive species uses of beaches, including California grunion, Pismo clams, and shorebirds including threatened western snowy plover.

2.2 PHYSICAL CONTEXT: LAND USE, TRANSPORTATION, AND COASTAL RESOURCES

This section includes descriptions of the cities located within the corridor, including development trends and the status of the cities' Local Coastal Programs (LCP). This is followed by an overview of the existing transportation infrastructure and significant natural resources in the corridor.

2.2.1 Land Use

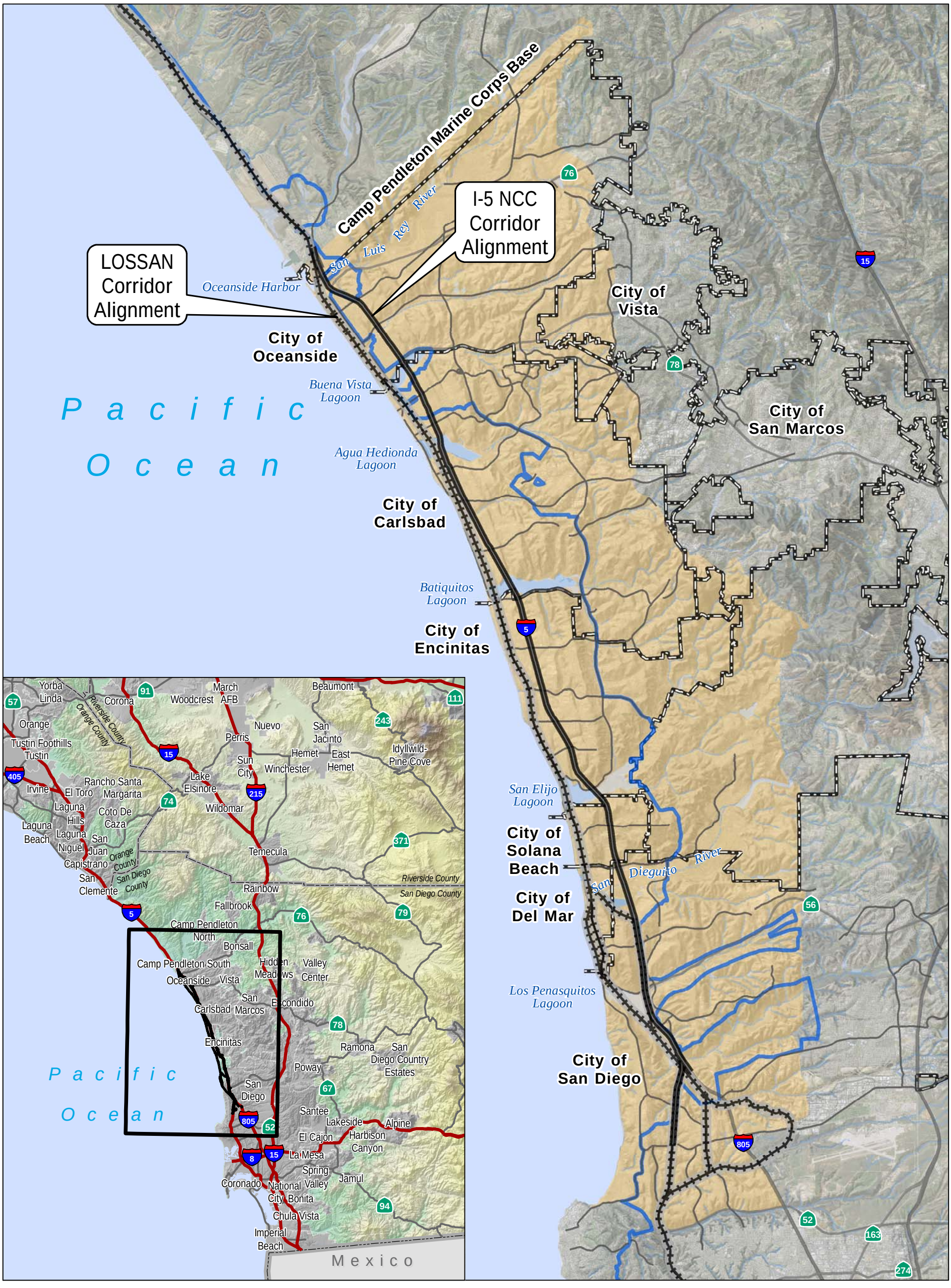
Six San Diego County cities lie entirely or partially within the NCC: San Diego, Solana Beach, Del Mar, Encinitas, Carlsbad, and Oceanside. In addition, six coastal lagoons and five creeks and rivers as well as associated open space and habitat preservation areas are located within the corridor and are discussed further in Section 2.2.6. Figure 2-2 provides an overview of the corridor and Figure 2-3 illustrates city and coastal zone boundaries and significant lagoon resource areas within the NCC.

Historic development trends in the corridor have not supported transit services as the majority of land in the NCC was developed when local land-use decisions supported low density, single-use development. This land use configuration required an extensive highway and arterial network to connect origins and destinations. However, passenger rail service in the corridor has experienced significant growth recently. Amtrak first introduced corridor service, formerly called the San Diegans, in 1971. The COASTER and SPRINTER rail transit services were added in 1995 and 2008, respectively. Considering the limited amount of remaining undeveloped land in the corridor, local jurisdictions and SANDAG are re-examining land-use policies and development patterns and have developed policies to introduce Smart Growth development clusters into the corridor to accommodate future growth with higher-density, mixed-use development serviced by transit; however, most land uses remain auto dependent.

Within the corridor, existing land uses vary. The majority of land located directly adjacent to the coastline, I-5 and rail ROWs has been developed for residential, light industrial, and/or commercial use, and much of the corridor's population density occurs along these transportation facilities; however, many significant coastal open space and natural resource areas also occur along the I-5 and rail ROWs, particularly where these facilities cross over Los Peñasquitos Creek, Carmel Valley Creek, the San Luis Rey River, and Los Peñasquitos, San Dieguito, San Elijo, Batiquitos, Agua Hedionda, and Buena Vista lagoons. Figure 2-4 illustrates existing (2006) population density distribution and land preservation areas in the corridor.

Travel demand in the project area has increased over time and has generally been influenced by population and employment growth in the region (Table 2-3). From 1970 to 2006, the San Diego County population grew by 125%. During that time, all of the coastal communities, with the exception of Del Mar, grew more rapidly, with the Carlsbad growing over 500%. In 2006, there were approximately 496,000 people residing within the corridor, which represents 16% of the regional population. An additional 113,000 people are anticipated to live in the corridor by the year 2030, an increase of 23%, yet a significantly reduced growth rate than that experienced in the county between 1970 and 2006. Figure 2-5 illustrates future (2030) population density distribution in the corridor. In 2005, there were approximately 203,000 housing units in the corridor, representing 18% of the regional housing stock. An additional 30,000 housing units are anticipated to be constructed within the corridor by 2030, a 15% increase over current conditions. In 2004, corridor employment was approximately 319,000, which was about 23% of the region's total employment. By 2030, corridor employment is expected to increase to 400,000.[7] Employment within the corridor is primarily located along established transportation routes or concentrated into large activity/employment centers. The majority of jobs in the corridor are located in the City of San Diego, particularly within the Sorrento Valley, Sorrento Mesa, University City/Golden Triangle areas, and at the University of California, San Diego (UCSD). Future employment growth in the corridor is expected to continue to occur within the established employment centers, along with expanding employment centers in the eastern portions of Carlsbad and Oceanside.

[7] *San Diego NCC – CSMP* (Chapter 3), July 2010.



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

FIGURE 2-2

Regional and Corridor Map

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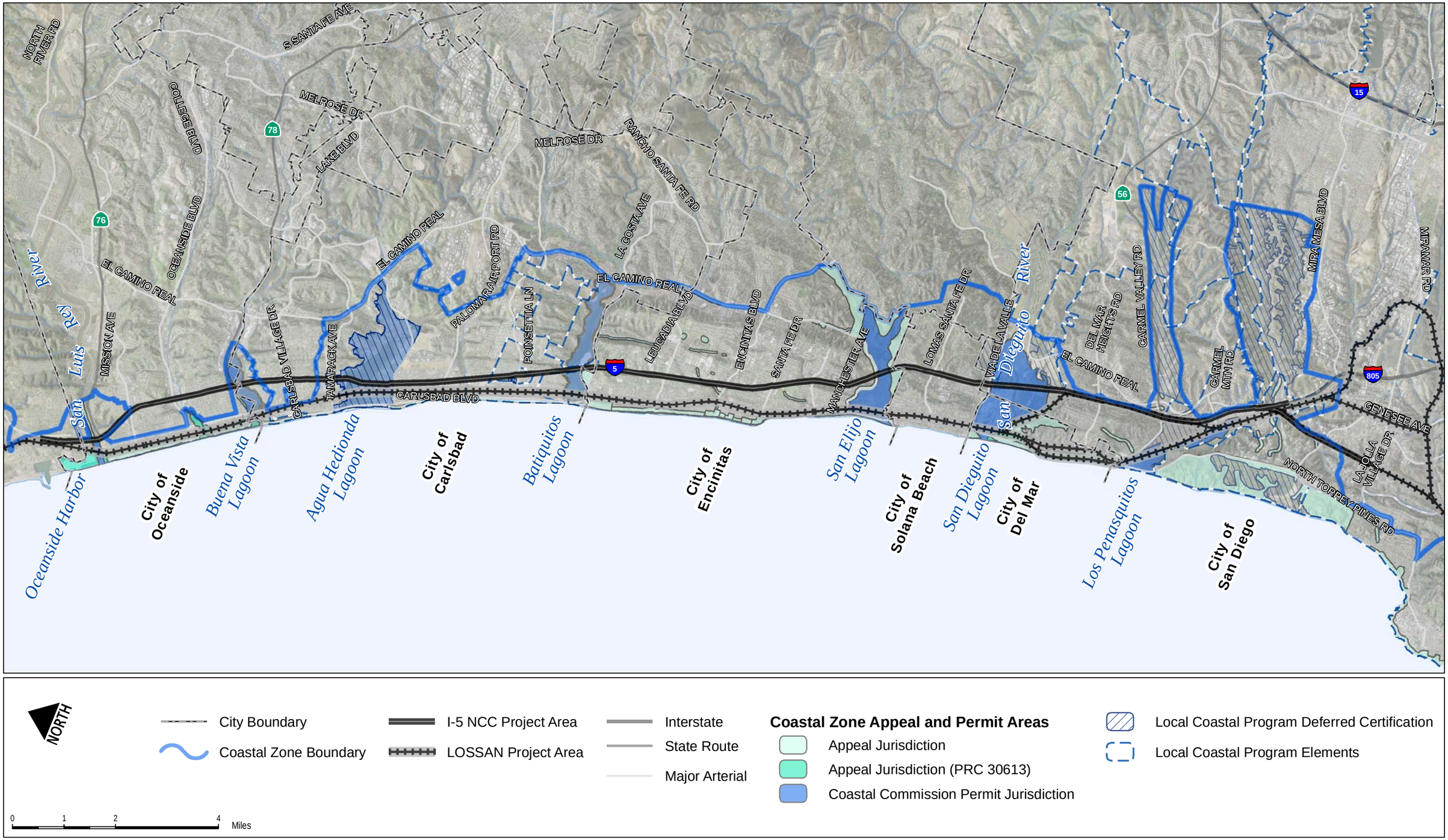

DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, USGS NHD Flowlines, Imagery: DigitalGlobe March 2008

FIGURE 2-3

Coastal Zone Jurisdiction Overview

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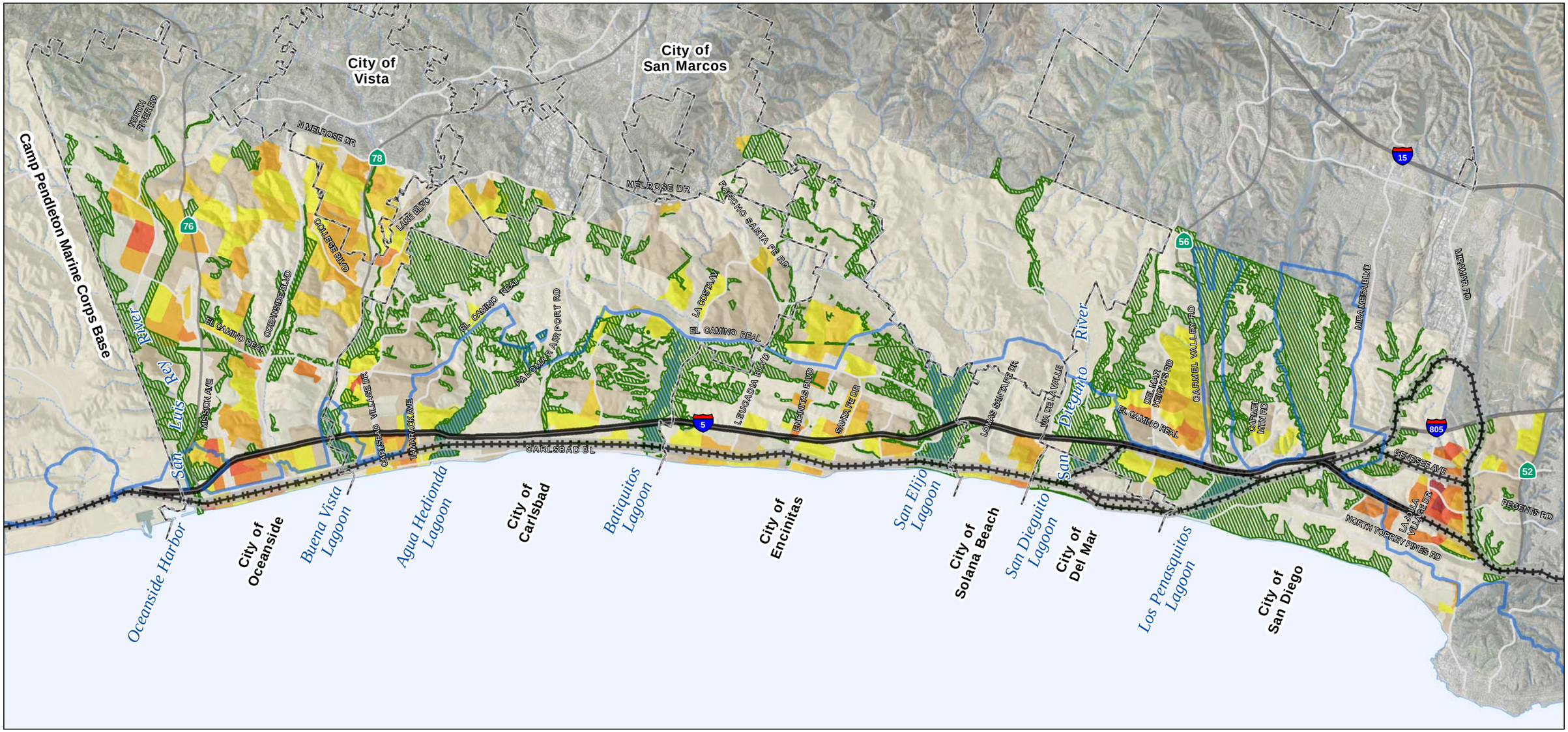

NORTH

0 1 2 4 Miles

City Boundary

Coastal Zone Boundary

Land Preservation Area

I-5 NCC Project Area

LOSSAN Project Area

Interstate

State Route

Major Arterial

2005 Population Density

Low (0 - 4 people/acre)

Medium (11-15 people/acre)

High (over 45 people/acre)

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

FIGURE 2-4

Population Density and Land Preservation Areas (2005)

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

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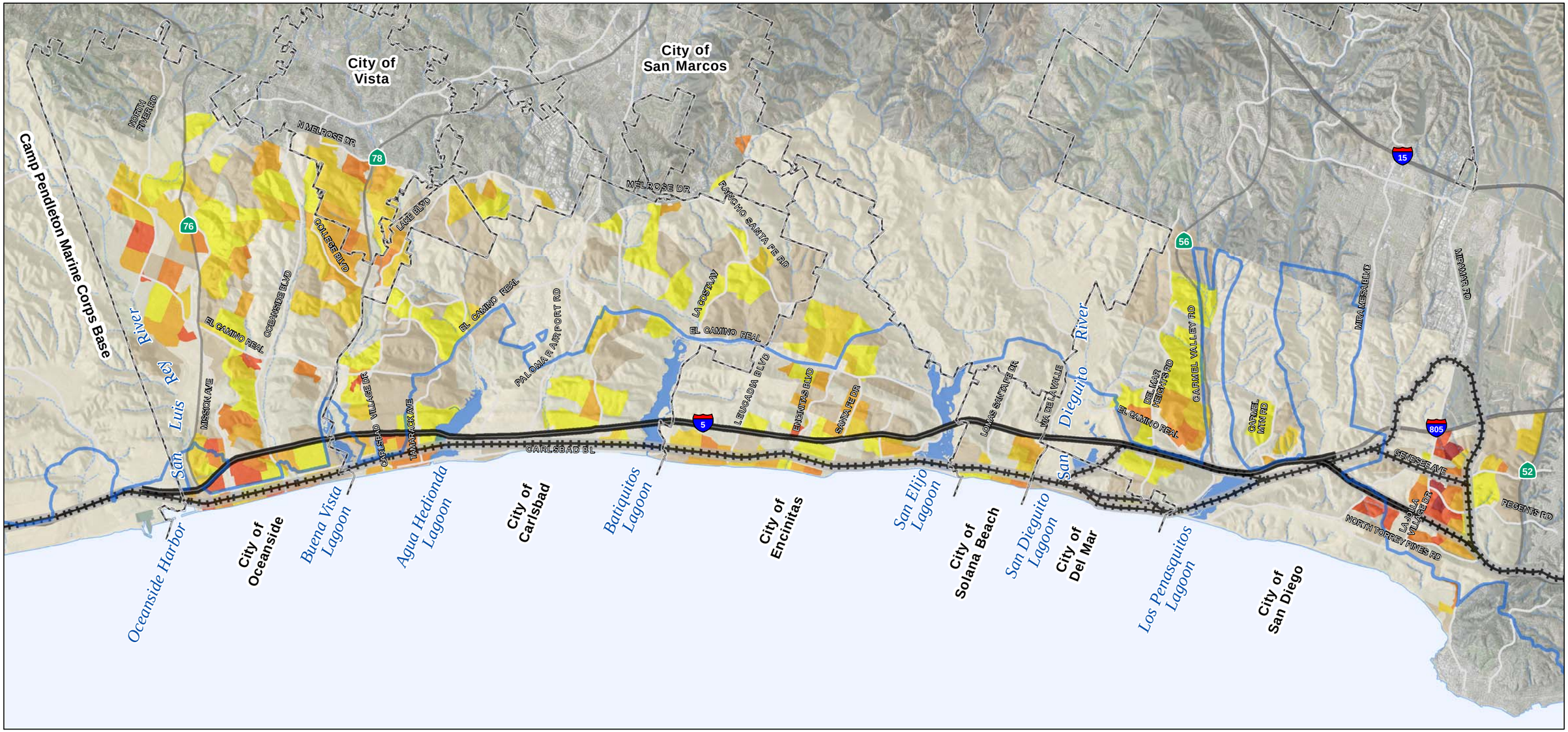

NORTH

0 1 2 4 Miles

City Boundary

Coastal Zone Boundary

I-5 NCC Project Area

LOSSAN Project Area

Interstate

State Route

Major Arterial

2030 Population Density

Low (0-4 persons/acre)

Medium (11-15 persons/acre)

High (over 45 persons/acre)

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

FIGURE 2-5

Population Density (2030 Projected)

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

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TABLE 2-3: POPULATION AND EMPLOYMENT (NORTH COAST CORRIDOR)

	Population			Employment		
	1970	2006	2030	1970	2004	2030
Oceanside	40,494	174,925	208,561	12,040	39,850	62,409
Carlsbad	14,944	98,607	128,772	1,779	54,347	79,188
Encinitas	17,210	62,815	71,025	3,151	25,012	29,736
Solana Beach	5,744	13,327	13,674	1,050	9,416	10,314
Del Mar	3,956	4,524	4,720	1,004	4,335	4,232
San Diego*	23,315	141,435	181,642	2,832	185,807	214,976
North Coast Corridor	105,663	495,633	608,394	21,856	318,767	400,855
San Diego County	1,357,854	3,066,820	3,855,085	566,900	1,449,349	1,913,682

Source: *San Diego NCC - Corridor System Management Plan* (Chapter 3), July 2010.

* City of San Diego population and employment is specific to areas within the NCC

Population growth in neighboring regions, which often exceeds that of the corridor due to the availability of affordable housing and developable land, also affects travel demand in the corridor by generating pass-through traffic to and from the border with Mexico, Riverside, Imperial, Orange and Los Angeles counties. While year 2030 population of San Diego County is expected to increase by 26% from 2006 population, this timeframe is expected to see population growth between 59 and 78% in neighboring regions such as Imperial and Riverside counties, and Tijuana, Mexico.[8] Travel between San Diego and these regions is expected to lead to additional increases in trips and therefore congestion on the NCC.

2.2.1.1 City of San Diego[9]

Existing Land Use

San Diego is the most populous city in the county. San Diego had a year 2000 population of over 1.2 million people and an overall land area of 342.5 square miles. The city comprises 52 communities, five of which are located within the corridor: La Jolla, University, Torrey Pines, Torrey Hills, and Carmel Valley. These communities are located in the northwestern-most area of the city.

Within these communities, primary land uses include park/open space, residential, commercial, light industrial, and UCSD. Residential land uses are generally located in the northern-most communities (Carmel Valley, Torrey Pines, and Torrey Hills) and in the communities surrounding UCSD (University City and La Jolla). Parks and open spaces are prominent in the areas surrounding the I-5/I-805 junction (University City and Torrey Pines), which include Torrey Pines State Reserve and Los Peñasquitos Canyon Preserve. In the northern-most area of the city (south of Solana Beach), a large open-space corridor, consisting of land mostly restricted from development, has been established within San Dieguito River Valley. Commercial land uses are generally located along major transportation corridors, including I-5, Del Mar Heights Road, La Jolla Village Drive, and surrounding UCSD. Industrial/employment land uses are concentrated in areas surrounding the I-5/I-805 junction (University City and Torrey Pines) and include high concentrations of employment in Sorrento Valley and North University City. UCSD, with a 2008 campus enrollment of 28,200 students and a 1,200-acre

[8] *San Diego NCC-CSMP* (Chapter 3), July 2010.

[9] *I-5 NCC Project Draft EIR/EIS* (Section 3-1), June 2010.

campus, is also located in the La Jolla area of San Diego, south of the corridor.[10] A portion of Del Mar Fairgrounds and Racetrack is located in the northern-most area of the city (south of Solana Beach), with the remainder of the property located in Del Mar. UCSD, Sorrento Valley, North University City, and Del Mar Fairgrounds and Racetrack are large trip generators in the corridor, though trips generated by Del Mar Fairgrounds and Racetrack are seasonal, occurring in the summer months. The relationship of this facility and the surrounding highway and rail system is further discussed in Sections 2.2.3 and 2.2.4. Figure 2-6 illustrates the portion of San Diego in the coastal zone and coastal permit jurisdiction boundaries.

Development Trends

For the past 40 years, the San Diego metropolitan area, like other California cities, has experienced rapid population growth and urbanization. Because the majority of land has been developed, the city is planning for more infill development in the future. The 2008 City of San Diego General Plan embodies development policies that represent a shift in focus from how to develop vacant land, which has historically been the norm, to how to reinvest in existing communities. To accomplish this, the plan focuses growth into mixed-use activity centers that are pedestrian-friendly and linked to an improved regional transit system. The intent of the strategy is to preserve established residential neighborhoods and open space while managing the city's long-term growth.

Local Coastal Program

San Diego has a fully certified LCP and issues coastal development permits throughout most of its coastal zone area. The City of San Diego LCP consists of 12 segments. One segment is the North City LCP, which is divided into individual communities, each with its own community plan or coastal land use plan. The City also prepared a Multiple Species Conservation Program Subarea Plan for the region's Natural Community Conservation Plan, which is a certified element of the LCP. Although the LCP land use plan is segmented and, in the case of the North City segment, subdivided into individual community plans, the local implementation plan consists of a single element. Not all areas included in the North City LCP have been fully certified; thus, the Coastal Commission has jurisdiction to issue coastal development permits in the uncertified areas based on consistency with the California Coastal Act. The areas of deferred certification relative to the PWP corridor are as follows:

- **Via de la Valle Specific Plan** includes approximately 100 acres east of I-5 and north of Via de la Valle.
- **South Slopes** includes a number of small, unplanned areas on the south slopes of the San Dieguito River Valley, east of I-5 and on properties outside the 100-year floodplain.
- **Carmel Valley** includes approximately 400 acres along Carmel Valley Creek, east of I-5 at Carmel Valley Road and situated within the Neighborhood #8 Precise Plan area (a certified area). This area includes portions of the valley located within the City's Urban Reserve (and outside of North City West area) further east.
- **Los Peñasquitos Regional Park** includes approximately 600 acres in Los Peñasquitos and Lopez Canyons, at the easterly end of Sorrento Valley Boulevard.
- **Torrey Pines State Natural Reserve** is a 75-acre area that includes a mesatop and steep coastal bluffs.
- **Cal Sorrento Property** includes approximately 25 acres located just east of I-805 and north of Los Peñasquitos Creek.

[10] Total Campus Enrollment. UC San Diego, Student Research and Information, Student Affairs. Fall 2008. http://studentresearch.ucsd.edu/sriweb/enroll/total.pdf

NORTH

0 0.25 0.5 1 Miles

Coastal Zone Boundary
City Boundary
I-5 NCC Project Area
LOSSAN Project Area
Interstate
State Route
Major Arterial

City of San Diego
Coastal Zone Appeal and Permit Areas
Appeal Jurisdiction
Coastal Commission Permit Jurisdiction
Local Coastal Program Deferred Certification
Local Coastal Program Element

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

FIGURE 2-6

Jurisdiction Map (City of San Diego)

- The areas of deferred certification are shown on Figure 2-6. The PWP improvements planned in San Diego would be located entirely in the North City LCP area and occur within University, Torrey Pines, Torrey Hills, and the North City Future Urbanizing Area. Within San Diego, the proposed TREP/PWP improvements span areas both within and outside the coastal zone, and would be located in areas subject to the City's certified LCP as well as areas of deferred certification.

2.2.1.2 City of Del Mar[11]

Existing Land Use

Del Mar is the smallest city in size and population in the corridor. The year 2000 population was approximately 4,400 people. The city has an overall land area of 1.79 square miles. It is a narrow, north-south oriented municipality bordered by Solana Beach to the north, San Diego to the east and the south, and the Pacific Ocean to the west. The city is located west of I-5. The rail corridor travels through Del Mar along the coast and bluffs at the south end of the city, turns inland at the north end, and runs between Camino Del Mar (Coast Hwy) to the west and Del Mar Fairgrounds and Racetrack to the east.

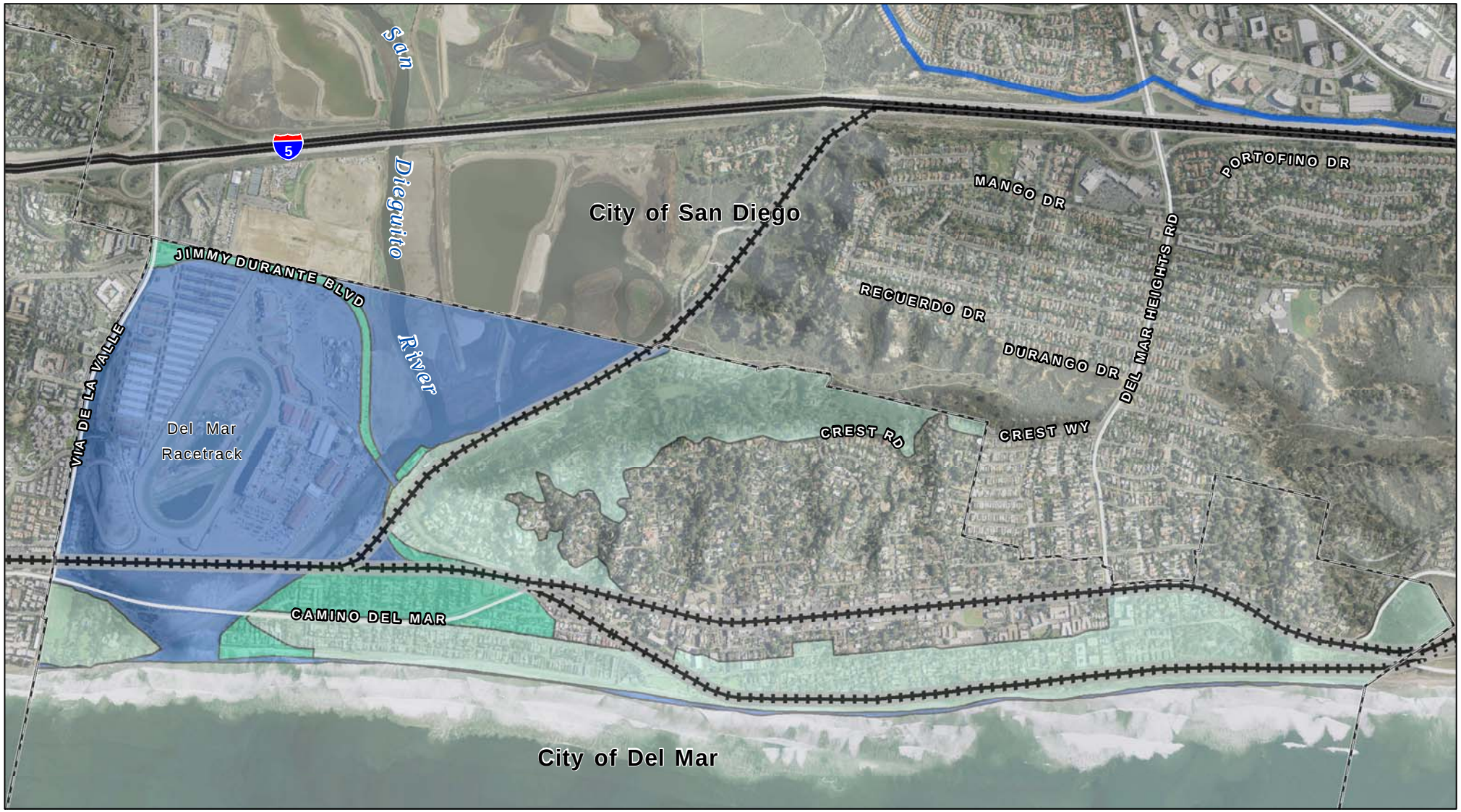
Because of its small size and desirable location, Del Mar is urbanized and consists primarily of residential land uses. The *1993 City of Del Mar Local Coastal Plan* divides the city into 10 districts, with allowable residential densities ranging from 1 to 17.5 dwelling units per acre (du/ac) specified for each district. The city also has interspersed commercial land uses along Camino Del Mar, a major transportation corridor, within an area known as "Village Center." This area serves as the city's principal commercial, tourism, and professional area. Del Mar Fairgrounds and Racetrack, a regional sporting and entertainment venue, is located in the northernmost area of the city, extending slightly into the City of San Diego. San Dieguito Lagoon separates Del Mar Fairgrounds and Racetrack from residential uses to the south. The Del Mar portion of the coastal zone and coastal permit jurisdiction boundaries are shown in Figure 2-7.

Development Trends

Del Mar is almost entirely developed. Compared to the San Diego region, Del Mar has experienced, and will likely continue to experience, low population growth as the city is mostly built out, has low housing vacancy rates, few multi-family developments, and high housing costs. Future development in the city will most likely consist of infill development and redevelopment on existing lots.

Development plans also exist for Del Mar Fairgrounds and Racetrack, which is managed by the 22nd District Agricultural Association, an independent agency of the State of California. The *2008 Draft Del Mar Fairgrounds and Horsepark Master Plan* proposes immediate near-term and conceptual long-term projects to be developed over the next 15 years. The near-term projects are intended to maintain and improve existing facilities, while the conceptual longer-term projects, which require additional planning and regulatory approval, consist primarily of maintaining existing facilities and constructing a new hotel, sports complex, other structures, and trails. Included in the long-term projects is a seasonal train platform adjacent to the existing LOSSAN tracks.

[11] *I-5 NCC Project Draft EIR/EIS* (Section 3-1), June 2010.



NORTH

0 0.25 0.5 1 Miles

Coastal Zone Boundary
City Boundary
I-5 NCC Project Area
LOSSAN Project Area
Interstate
State Route
Major Arterial

City of Del Mar

Coastal Zone Appeal and Permit Areas

Appeal Jurisdiction
Appeal Jurisdiction (PRC 30613) - City Issues Permit (City of Del Mar Only)
Coastal Commission Permit Jurisdiction

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

FIGURE 2-7

Jurisdiction Map (City of Del Mar)

Local Coastal Program

Del Mar has a certified LCP and issues coastal development permits throughout most of its coastal zone area. Del Mar's LCP is certified as a single element and includes the city's Multiple Species Conservation Plan Subarea Plan. The 22nd District Agricultural Association lands located within the Del Mar LCP are in a deferred certification area. The Coastal Commission retains jurisdiction in this area and issues coastal development permits based in part on project consistency with the Coastal Act. TREP/PWP improvements within Del Mar are limited to rail line improvements and associated facilities including a proposed passenger platform. Within Del Mar, the proposed TREP/PWP improvements would be located in areas subject to the City's certified LCP as well as areas of deferred certification.

2.2.1.3 City of Solana Beach[12]

Existing Land Use

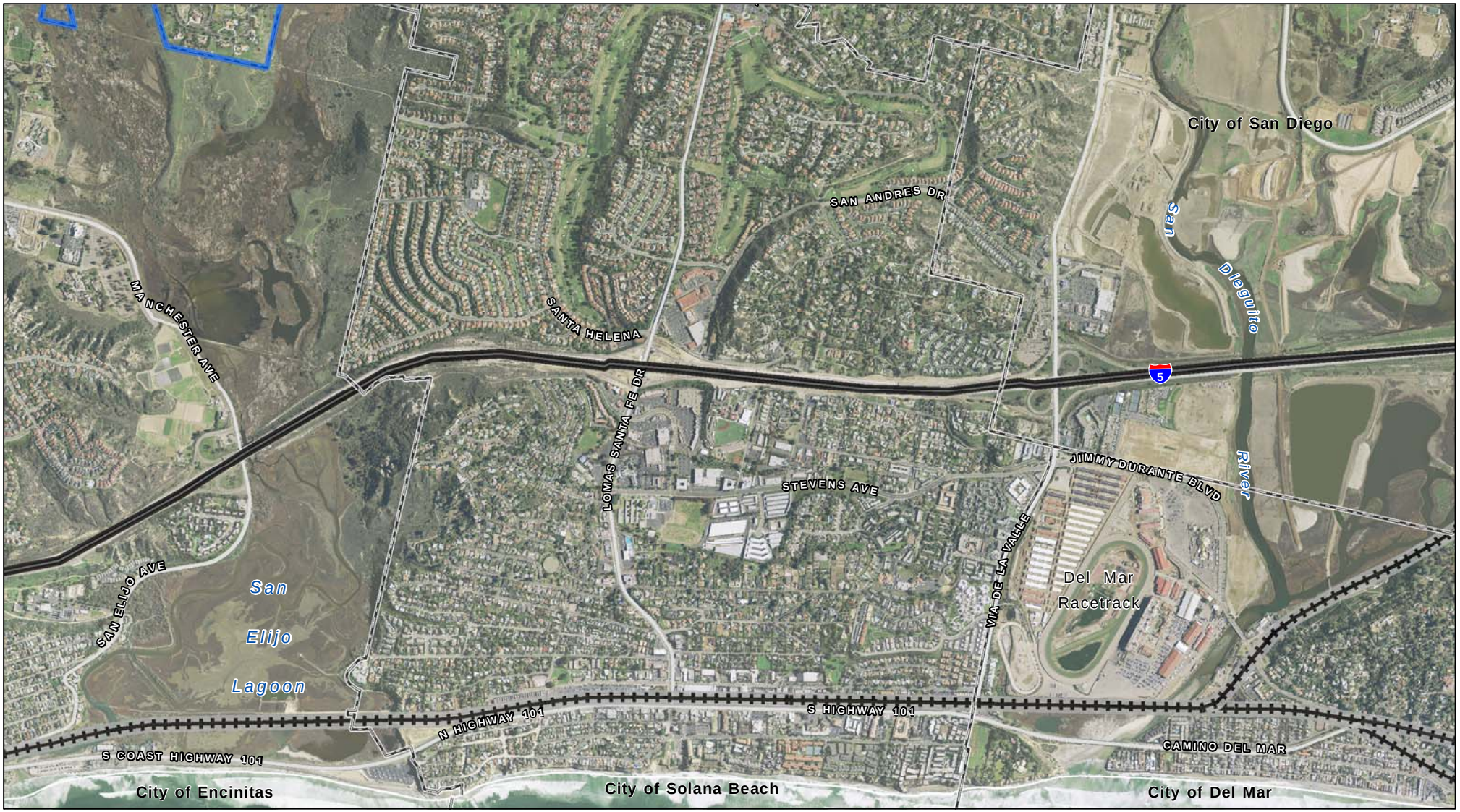
North of Del Mar, Solana Beach is the next least-populous city in the corridor. Solana Beach had a year 2000 population of just under 13,000 people and an overall land area of 3.42 square miles. Solana Beach is bordered by Encinitas to the north, unincorporated San Diego County to the east, Del Mar and San Diego to the south, and the Pacific Ocean to the west. The city is bisected by I-5. The LOSSAN rail corridor runs through Solana Beach parallel to, and east of, Coast Highway.

Due to its size and desirable location, Solana Beach is almost entirely developed. The majority of land consists of residential land uses, with densities ranging from 0.16 to 20 du/ac. Commercial land uses, including some mixed-use development, are located along corridors, including Coast Highway, Cedros Avenue, Stevens Avenue, and in proximity to the Lomas Santa Fe Drive/I-5 interchange. Immediately west of I-5, south of Lomas Santa Fe Drive, commercial, public services, and industrial land uses are grouped into one area. East of I-5, there is a regional retail center and a golf course that weaves through residential developments. Immediately north of the city, partially within the city boundary, is San Elijo Lagoon. The LOSSAN rail corridor passes through a generally commercial area with some higher-density residential and mixed uses. The Solana Beach portion of the coastal zone and coastal permit jurisdiction boundaries are shown in Figure 2-8.

Development Trends

In 1986, when Solana Beach was incorporated, the population was estimated to be about 15,000 people. Since then, population estimates have decreased due to increased vacancy rates, a decrease in the average household size, and an increase in the number of housing units being purchased as second homes. Future development in the city will most likely consist of infill development and redevelopment in areas west of I-5, along Coast Highway, Cedros Avenue, and Lomas Santa Fe Drive, where scattered vacant sites are either designated or considered suitable for residential use. The city encourages the expansion of housing development opportunities through mixed-use development. Adopted amendments to the *City of Solana Beach General Plan* facilitate this growth stating the following: "In order to implement the city's redevelopment plan, mixed-use concepts of the Highway 101 Corridor Specific Plan, and the Housing Element, residential uses are allowed as a secondary use in conjunction with permitted commercial uses."

[12] *I-5 NCC Project Draft EIR/EIS* (Section 3-1), June 2010.



NORTH

Coastal Zone Boundary
City Boundary
I-5 NCC Project Area
LOSSAN Project Area
Interstate
State Route
Major Arterial

0 0.25 0.5 1 Miles

NOTE: City of Solana Beach does not have a certified Local Coastal Plan

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

FIGURE 2-8

Jurisdiction Map (City of Solana Beach)

Local Coastal Program

Solana Beach is located entirely in the coastal zone; however, it is the only city in the corridor that does not yet have a certified LCP. The City's LCP land-use plan component is pending before the Coastal Commission. The Coastal Commission currently has jurisdiction to issue coastal development permits within the city.

2.2.1.4 City of Encinitas[13]

Existing Land Use

Encinitas is the third most populous city in the corridor, with a 2000 population of just over 58,000 persons and an overall land area of 19.4 square miles. Encinitas is bordered by Carlsbad to the north, unincorporated San Diego County to the east, Solana Beach to the south, and the Pacific Ocean to the west. The I-5 corridor is located in the western area of the city. The LOSSAN rail corridor is located west of I-5, generally paralleling the east side of Coast Highway.

Encinitas is largely urbanized and consists of a mixture of residential, commercial, open space, and agricultural land uses. Residential land uses are the most prominent with densities ranging from 0.25 to 25 du/ac. Commercial land uses are generally located along major transportation corridors, including Coast Highway; Encinitas Boulevard; and El Camino Real. Agricultural land uses exist throughout the city, with larger areas located east of I-5 near Encinitas Ranch Golf Course. Open spaces are also located east of I-5 near Batiquitos Lagoon, which is located at the northern city boundary; San Elijo Lagoon, which is located at the southern city boundary; and Encinitas Ranch Golf Course. Undeveloped land is located east of I-5 near Batiquitos Lagoon, west of I-5 at Santa Fe Drive, and east of South El Camino Real near Manchester Avenue. The Encinitas portion of the coastal zone and coastal permit jurisdiction boundaries are shown in Figure 2-9.

Development Trends

Like the majority of coastal cities in southern California, Encinitas has grown at a relatively rapid pace over the last several decades. As such, the *City of Encinitas General Plan* addresses growth management and states policies and guidelines to facilitate development in a slower, more orderly manner, in accordance with a long-term plan, to protect and enhance community values. Policy 2.3 states, "growth will be managed in a manner that does not exceed the ability of the City, special districts and utilities to provide a desirable level of facilities and services."

Much of the remaining undeveloped land within the city has environmental constraints. There is potential to add housing units as infill in mixed-use developments in downtown Encinitas and along Coast Highway.

Local Coastal Program

Encinitas has a fully certified LCP and issues coastal development permits throughout its coastal zone area. The City of Encinitas LCP is certified as a single element and includes the City's Multiple Habitat Conservation Program. There are no areas of deferred certification in Encinitas.

[13] *I-5 NCC Project Draft EIR/EIS* (Section 3-1), June 2010.

NORTH

0 0.25 0.5 1 Miles

City Boundary

Coastal Zone Boundary

I-5 NCC Project Area

LOSSAN Project Area

Interstate

State Route

Major Arterial

City of Encinitas

Coastal Zone Appeal and Permit Areas

Appeal Jurisdiction

Coastal Commission Permit Jurisdiction

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

FIGURE 2-9

Jurisdiction Map (City of Encinitas)

2.2.1.5 City of Carlsbad[14]

Existing Land Use

Carlsbad is the fourth most populous city in the corridor, with a 2000 population of just under 41,700 persons and an overall land area of 42.2 square miles. Carlsbad is bordered by Oceanside to the north, the cities of Vista and San Marcos to the east, Encinitas to the south, and the Pacific Ocean to the west. I-5 travels through the western area of the city. The LOSSAN rail corridor runs parallel to, and west of I-5 and east of Carlsbad Boulevard (Coast Highway).

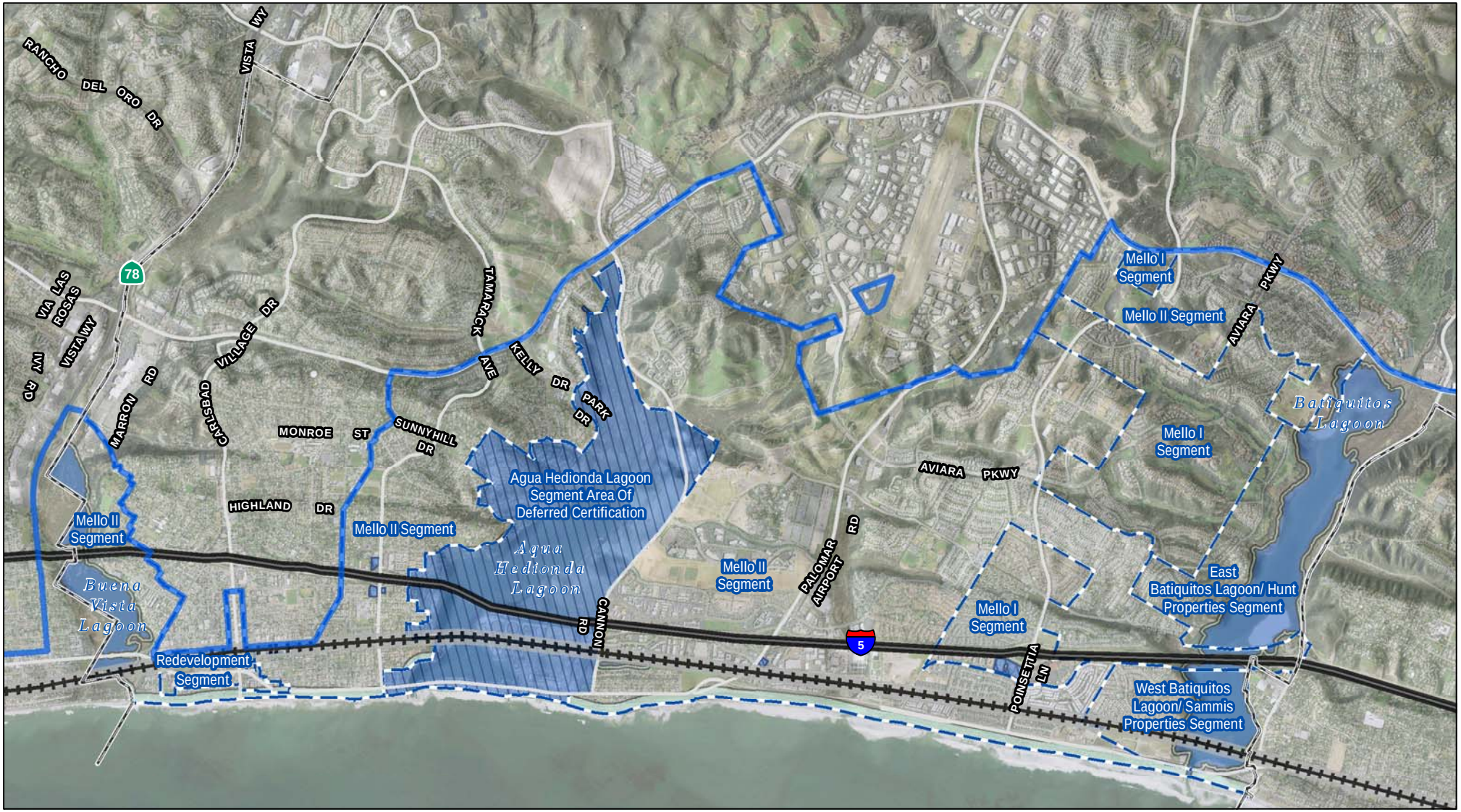
Carlsbad is an urbanized municipality with a mix of land uses. Residential uses are predominant and concentrated in the northern and southern areas of the city. McClellan-Palomar Airport is located south of the Agua Hedionda Lagoon valley and north of Palomar Airport Road in the geographic center of the city. Because of health, safety and noise impacts associated with airport operations, residential and institutional uses are excluded from large areas around the airport. These areas have instead been developed into industrial and commercial uses or retained as open space. Thus, central Carlsbad has become a regional employment center. Commercial land uses are located along major thoroughfares including Carlsbad Village Drive and State Route 78 (SR-78), and east of I-5 (between Cannon Road and Palomar Airport Road). Vacant land is generally in areas surrounding the airport and industrial center. The city also has interspersed golf course, public service, and public utility lands. The Buena Vista, Agua Hedionda, and Batiquitos Lagoons are located in Carlsbad. Carlsbad also has several large tourist attractions, including Legoland, “The Flower Fields,” Westfield Shoppingtown Plaza El Camino Real, and the Carlsbad Company stores. The Carlsbad portion of the coastal zone and coastal permit jurisdiction boundaries are shown in Figure 2-10.

Development Trends

Since 1986, Carlsbad has been a “growth management” city, where major public facilities have been carefully planned and financed with defined capacities to best serve a targeted build out population and number of household units. Future development patterns will be influenced by the city’s unique landforms, nonresidential central area, the airport, and the regional employment center surrounding the airport.

To help preserve quality of life for its residents, the city has developed the *Carlsbad Growth Management Plan*, which was ratified by voters in 1986, and is included in the *1994 Carlsbad General Plan*. The Growth Management Plan ensures that adequate public facilities and services accompany new development. Additionally, *the Citywide Facilities and Improvement Plan* and the *Local Facilities Management Plan* have been established to provide a more orderly and systematic set of development guidelines. Based on targeted numbers, as of January 2004, Carlsbad had been developed to approximately 72% of its capacity. An additional 11% will be added to its capacity for projects that are planned and/or under construction. The remaining 17% of residential capacity remains undetermined and will most likely consist of infill development.

[14] *I-5 NCC Project Draft EIR/EIS* (Section 3-1), June 2010.



NORTH

0 0.25 0.5 1 Miles

City Boundary
Coastal Zone Boundary
I-5 NCC Project Area
LOSSAN Project Area
Interstate
State Route
Major Arterial

City of Carlsbad

Coastal Zone Appeal and Permit Areas

Appeal Jurisdiction
Coastal Commission Permit Jursidiction
Local Coastal Program Deferred Certification
Local Coastal Program Element

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

FIGURE 2-10

Jurisdiction Map (City of Carlsbad)

Local Coastal Program

Carlsbad has a certified LCP and issues coastal development permits throughout most of its coastal zone area. The City of Carlsbad LCP consists of six segments that include the Agua Hedionda land use plan (which is not fully certified by the Coastal Commission); the Mello I and Mello II segments; the West Batiquitos Lagoon/Sammis Properties segments; East Batiquitos Lagoon/Hunt Properties segments, and the Carlsbad Village Redevelopment Area segment. In addition, Carlsbad completed a Multiple Habitat Conservation Program Subarea Plan, which has been incorporated into the Mello I, Mello II, West Batiquitos Lagoon/Sammis Properties, and East Batiquitos Lagoon/Hunt Properties segments of the City's certified LCP. Not all properties included in the City of Carlsbad LCP have been fully certified; thus, the Coastal Commission retains jurisdiction to issue coastal development permits in these areas. The areas of deferred certification consist of the following:

- **Tamarack Street 1** includes two properties located at the northwest corner of I-5 and Tamarack Street.
- **Tamarack Street 2** includes one property located at the southwest corner of I-5 and Tamarack Street.
- **Tamarack Street 3** includes two properties located at the northeast corner of I-5 and Tamarack Street.
- **Palomar Airport Road/Avenida Encinas** includes one property located at the southeast corner of Avenida Encinas and Palomar Airport Road.
- **I-5/Poinsettia Lane** includes properties described as Lots 2–7 of Specific Plan SP-186 located at the northwest corner of I-5/Poinsettia Lane.
- **Agua Hedionda Lagoon** includes the lagoon area and adjacent upland areas. A coastal land use plan is certified for this segment; however, the segment continues to be an area of deferred certification until an implementation plan for the segment is certified.

Areas of deferred certification within Carlsbad are shown in Figure 2-10. Within Carlsbad, the proposed TREP/PWP improvements would be located in areas subject to the City's certified LCP as well as areas of deferred certification.

2.2.1.6 City of Oceanside[15]

Existing Land Use

Oceanside is the second most populous city located in the corridor, with a 2000 population of just over 161,000 people and an overall land area of 42.16 square miles. Oceanside is bordered by Camp Pendleton to the north, the city of Vista and unincorporated San Diego County to the east, Carlsbad to the south, and the Pacific Ocean to the west. I-5 travels through the western area of the city. Just south of the city limits, the LOSSAN rail corridor crosses to the west of Coast Highway and continues parallel to the ocean.

West of I-5, Oceanside is highly urbanized. Residential land uses are predominant, with densities ranging from 0.9 to 43.0 du/ac. This includes transit-oriented development (TOD) at the Oceanside Transit Center (COASTER/SPRINTER/Amtrak/bus) station. The eastern areas of the city are generally more rural in character, with a greater amount of open space, agricultural, and low-density residential lands. Oceanside has a well-defined commercial downtown extending north and south along both sides of Pacific Coast Highway. In addition to the downtown area, commercial land uses are also generally

[15] *I-5 NCC Project Draft EIR/EIS* (Section 3-1), June 2010.

located along major transportation corridors including Mission Avenue, SR-76, and Oceanside Boulevard. Industrial land uses are concentrated east of I-5 and north of Oceanside Boulevard, in the Rancho Del Oro planning area. Vacant/undeveloped land uses generally surround existing industrial areas. The city also has interspersed public service, park, golf course, and agricultural lands. An open space corridor of mainly undevelopable land associated with San Luis Rey River is located along the northern edge of the city. The Oceanside portion of the coastal zone and coastal permit jurisdiction boundaries are shown in Figure 2-11.

Development Trends

Since 1970, Oceanside's population growth has occurred at a higher rate than the overall San Diego region. During the 1970s and 1980s, the population grew by 82% and 67%, respectively. By 1995, approximately 75% of the land was developed. Approximately 10% of the remaining land is undevelopable.

The *City of Oceanside General Plan* identifies a broad range of residential land-use categories, housing types, and densities. The city does not currently implement any growth-management activities to constrain residential development.

Local Coastal Program

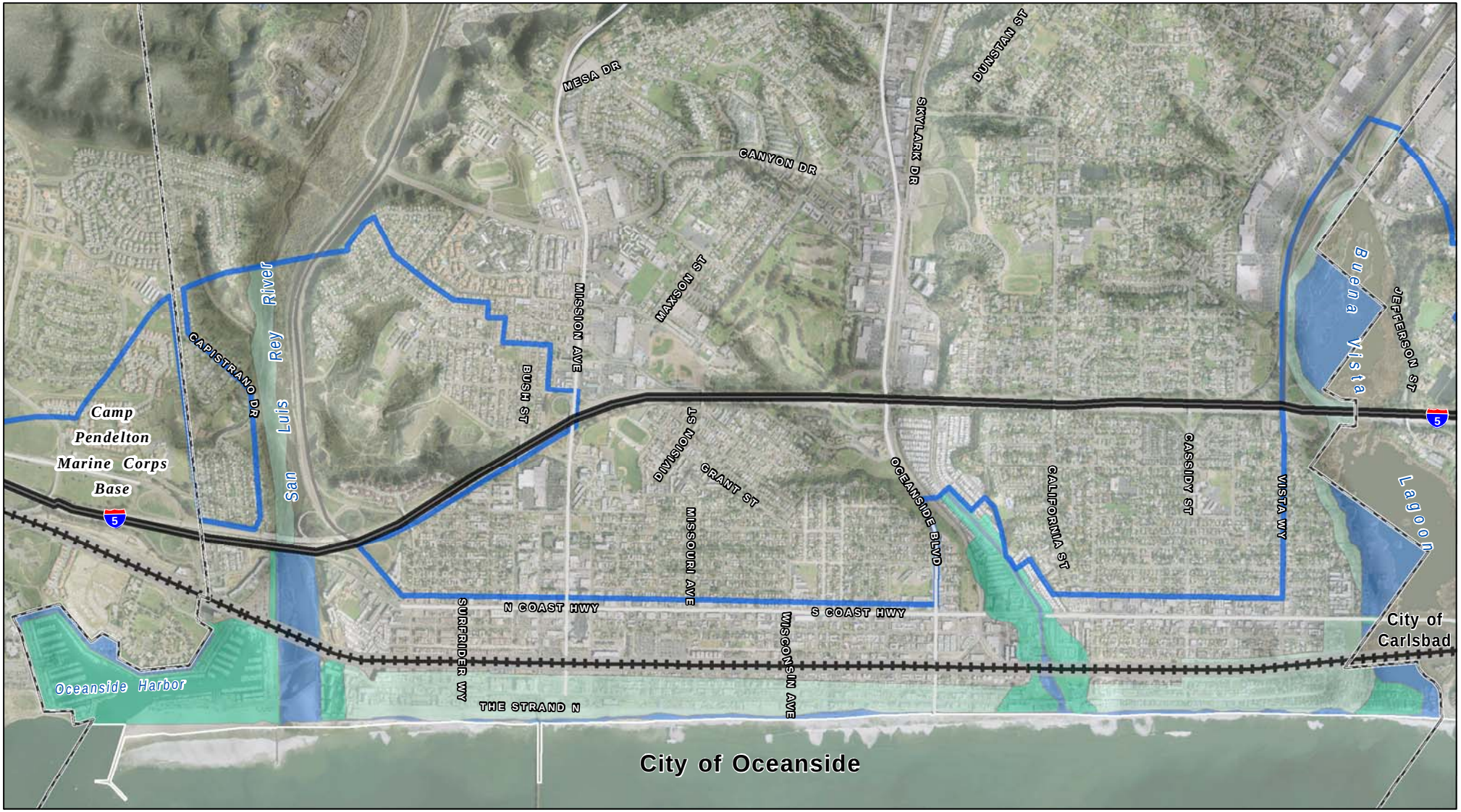
Oceanside has a fully certified LCP and issues coastal development permits throughout its coastal zone area. City of Oceanside LCP is certified as a single element. There are no areas of deferred certification in Oceanside. Within Oceanside, the proposed TREP/PWP improvements span areas both within and outside the coastal zone boundary.

2.2.2 North Coast Corridor Travel Customers

The term "travel shed" is generally used to define a corridor where trips tend to cluster in a linear pattern with feeder routes (highway, transit, non-motorized) linking to arterials carrying longer distance trips within the larger metropolitan area. The entire NCC travel shed is approximately 30 miles long, consists of approximately 111,215 gross acres, and is home to about 0.5 million people. While this TREP/PWP addresses only the portion of the travel shed located in the coastal zone (approximately 11,066 gross acres), much of the travel shed's primary transportation facilities, namely the I-5 highway and LOSSAN rail corridor facilities, are located almost entirely in the coastal zone and are critical not only to maintaining access to the corridor's coastal areas but also to maintaining the regional, interregional, and international transportation systems. The NCC accommodates approximately 2.5 million daily person-trips, or approximately 23% of the 11 million daily trips that occur within San Diego County. By 2030, the travel shed is projected to accommodate 3.27 million daily trips, a 30% increase over existing conditions.[16]

There are a number of trip types occurring within the travel shed that affect the operation of the corridor's transportation facilities. An understanding of how the facilities are used assists in framing the context of the improvements needed to achieve the TREP/PWP transportation and resource enhancement objectives for the corridor.

[16] *San Diego NCC – CSMP* (Chapter 4), July 2010.



NORTH

0 0.25 0.5 1 Miles

City Boundary

Coastal Zone Boundary

I-5 NCC Project Area

LOSSAN Project Area

Interstate

State Route

Major Arterial

City of Oceanside

Coastal Zone Appeal and Permit Areas

Appeal Jurisdiction

Appeal Jurisdiction (PRC 30613)

Coastal Commission Permit Jurisdiction

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

FIGURE 2-11

Jurisdiction Map (City of Oceanside)

2.2.2.1 Trip Types[17]

For the purpose of this TREP/PWP, corridor travel-shed trips are divided into the following five different types:

- **Local trips** are typically short trips to community or neighborhood services. Of the 2.5 million daily trips within the travel shed, 60% (1.5 million) are local trips. Because there are few continuous north-south arterials throughout the length of the travel shed, many of these trips occur on I-5. On some sections of I-5, more than 60% of trips are less than five miles in length during peak travel periods. Traffic volumes generated by local trips contribute to congestion within the I-5 corridor and affect the overall operational efficiency of this facility.
- **Commuter trips** connect people to large employment centers within the travel shed. Peak commuting hours are 6:00 A.M.–9:00 A.M. (morning) and 4:00 P.M.–7:00 P.M. (evening). Within the travel shed, commuter trips are predominately southbound in the morning and northbound in the evening. Large employment centers also attract commuters from outside of the travel shed, further affecting daily trip patterns. Census data from 2000 and field data indicates that during the morning peak-travel period, more than 75% of commute trips within the NCC use I-5.
- **Interregional trips** are longer and either originate in or are destined for San Diego County. Because I-5 is part of the larger interstate system, an increasing number of interregional trips occur within the travel shed each day. By 2030, interregional trips are anticipated to grow by approximately 78% for travel to and from Orange County, Riverside County, and Tijuana, Mexico. Additionally, the LOSSAN corridor is used by the Amtrak Surfliner service, the second busiest intercity rail service in the nation.
- **Recreational and tourism trips** connect people from a variety of locations and distances to major recreational and tourism destinations within the travel shed, many of which are located in the coastal zone. These trips access approximately 30 miles of beaches that draw almost one-half of all annual beach users in the San Diego region. Other destinations within the travel shed include Legoland, various parks and open space areas, and seasonal destinations such as Del Mar Fairgrounds and Racetrack, and Carlsbad Flower Fields. Usage of these facilities is shown in Table 2-4. These trips have various origins, including those outside of the travel shed, and are generally higher on the weekends and typically consist of more high-occupancy vehicle (HOV) trips than what occurs during the weekday. Field counts indicate that some sections of I-5 have higher traffic volumes on the weekend with up to 50% of the traffic consisting of HOV trips. I-5 and the arterial street system providing the primary means of access to recreation and tourism locations within the travel shed. As such, the travel shed is subject to large volumes of recreational and tourism trips on I-5.
- **Goods movement trips** in the travel shed move goods and facilitate regional, interstate, and international commerce. In the San Diego region, goods movement activities typically start at the ports of entry located at the International border with Mexico and the two marine terminals at the Port of San Diego. I-5 serves as a major international trucking trade route, linking Mexico, the U.S., and Canada. I-5 also connects intermodal facilities in San Diego County to other locations throughout Southern California. The LOSSAN rail corridor also provides a direct freight rail linkage between the two marine terminals and intermodal facilities.

[17] *San Diego NCC – CSMP* (Chapter 4), July 2010.

TABLE 2-4: DAILY USE OF RECREATIONAL AND TOURISM DESTINATIONS (NORTH COAST CORRIDOR)

Recreation/Tourism Destinations	Average Daily Visitors
Torrey Pines State Beach	7,000 (July/August 2009)
San Elijo State Beach	3,700 (July/August 2009)
Cardiff State Beach	8,300 (July/August 2009)
Carlsbad State Beach	6,300 (July/August 2009)
San Diego County Fair	57,000 (2008)
Del Mar Horse Races	16,000 (2008)
Legoland	5,000 (2007)

Source: California Department of Parks and Recreation. 22nd Agricultural District Association. Legoland.

2.2.2.2 Trip Generators and Activity Centers

Figure 2-12 illustrates many of the corridor's main activity centers.

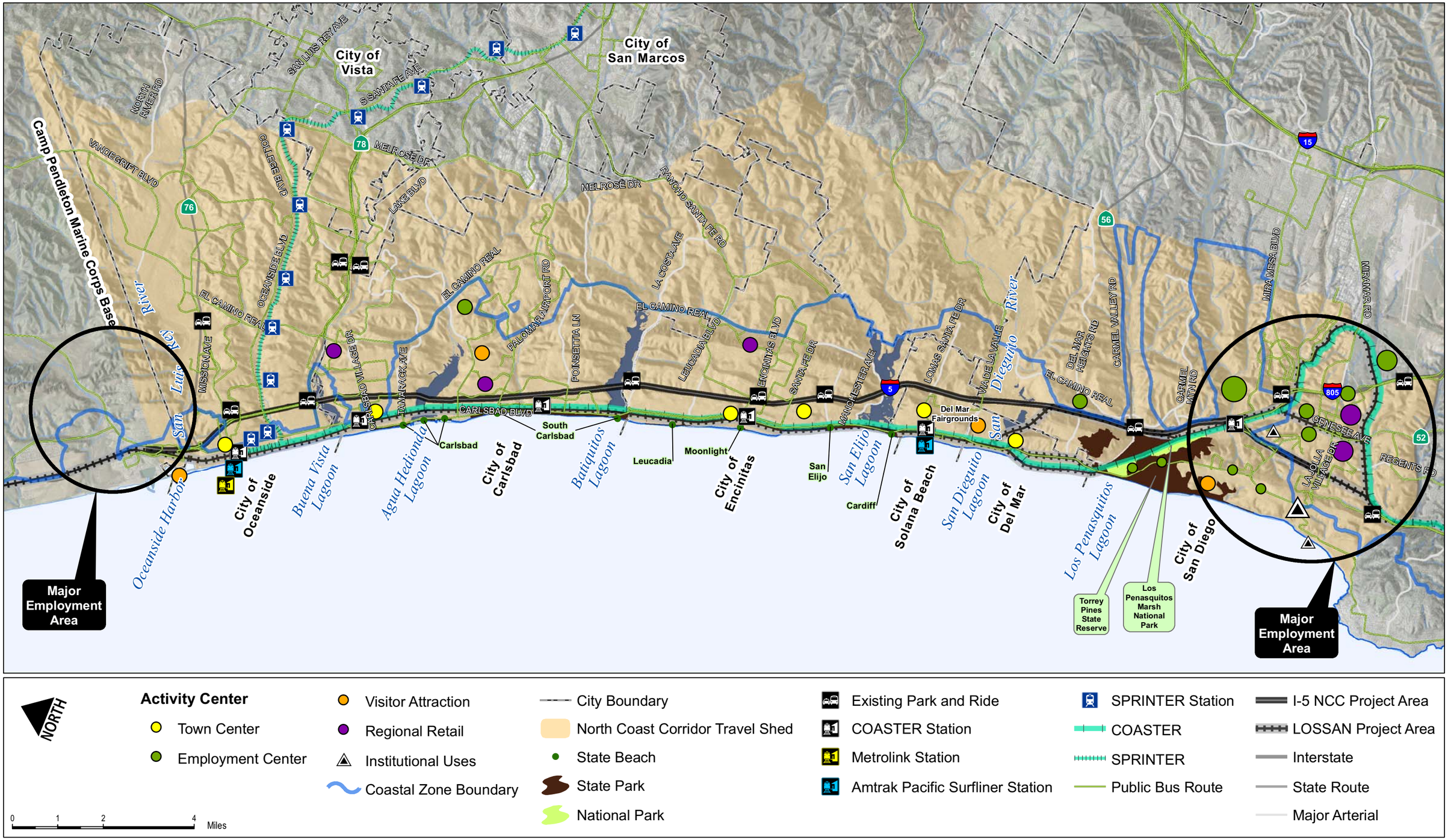
The transportation mode selected to facilitate these trips is often determined by the connectivity provided by each option. To define the type and scope of improvements needed within the corridor, it is important to evaluate the location of key activity centers relative to the existing transportation network. By evaluating this type of information, design parameters can be developed to facilitate rather than hinder connectivity between I-5, the LOSSAN rail corridor, and coastal resources.

2.2.3 Existing Rail & Transit Facilities

2.2.3.1 LOSSAN Rail Corridor: COASTER, Amtrak, Metrolink, Freight Rail

The LOSSAN rail corridor connects the major metropolitan areas of Southern California and the Central Coast, serves some of the most populous areas of the state, and runs through six counties: San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego. It is the second busiest intercity rail corridor in the nation. Amtrak's Pacific Surfliner intercity rail, Metrolink and COASTER commuter rail, and BNSF Railway and Union Pacific (UP) freight services all operate along parts of the corridor.

The LOSSAN segment within the NCC was initially constructed by Santa Fe Rail Lines between 1881 and 1918. In 1992, San Diego Northern Railway (SNDR), a subsidiary of the North County Transit District (NCTD), acquired this segment of the rail corridor from Atchison, Topeka & Santa Fe Railroad Company. In 1995, NCTD began operating the COASTER commuter rail service in the corridor from Oceanside to downtown San Diego. Amtrak intercity rail, Metrolink commuter rail and BNSF Railway service also operate in the NCC portion of the LOSSAN corridor. Figure 2-13 illustrates the LOSSAN rail corridor as well as the other transit facilities in the corridor. As rail use has increased, the rail corridor has approached design capacity; thus, there has been an interest in improving corridor infrastructure to increase capacity and operating performance to support existing and proposed levels of rail service. Approximately one-half of the line is single track without passing tracks. Thus, multiple operators are required to share one track for both directions of travel.



NORTH

Activity Center

- Town Center
- Employment Center
- Visitor Attraction
- Regional Retail
- Institutional Uses
- Coastal Zone Boundary
- City Boundary
- North Coast Corridor Travel Shed
- State Beach
- State Park
- National Park
- Existing Park and Ride
- COASTER Station
- Metrolink Station
- Amtrak Pacific Surfliner Station
- SPRINTER Station
- COASTER
- SPRINTER
- Public Bus Route
- I-5 NCC Project Area
- LOSSAN Project Area
- Interstate
- State Route
- Major Arterial

0 1 2 4 Miles

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

FIGURE 2-12

Activity Centers (North Coast Corridor)

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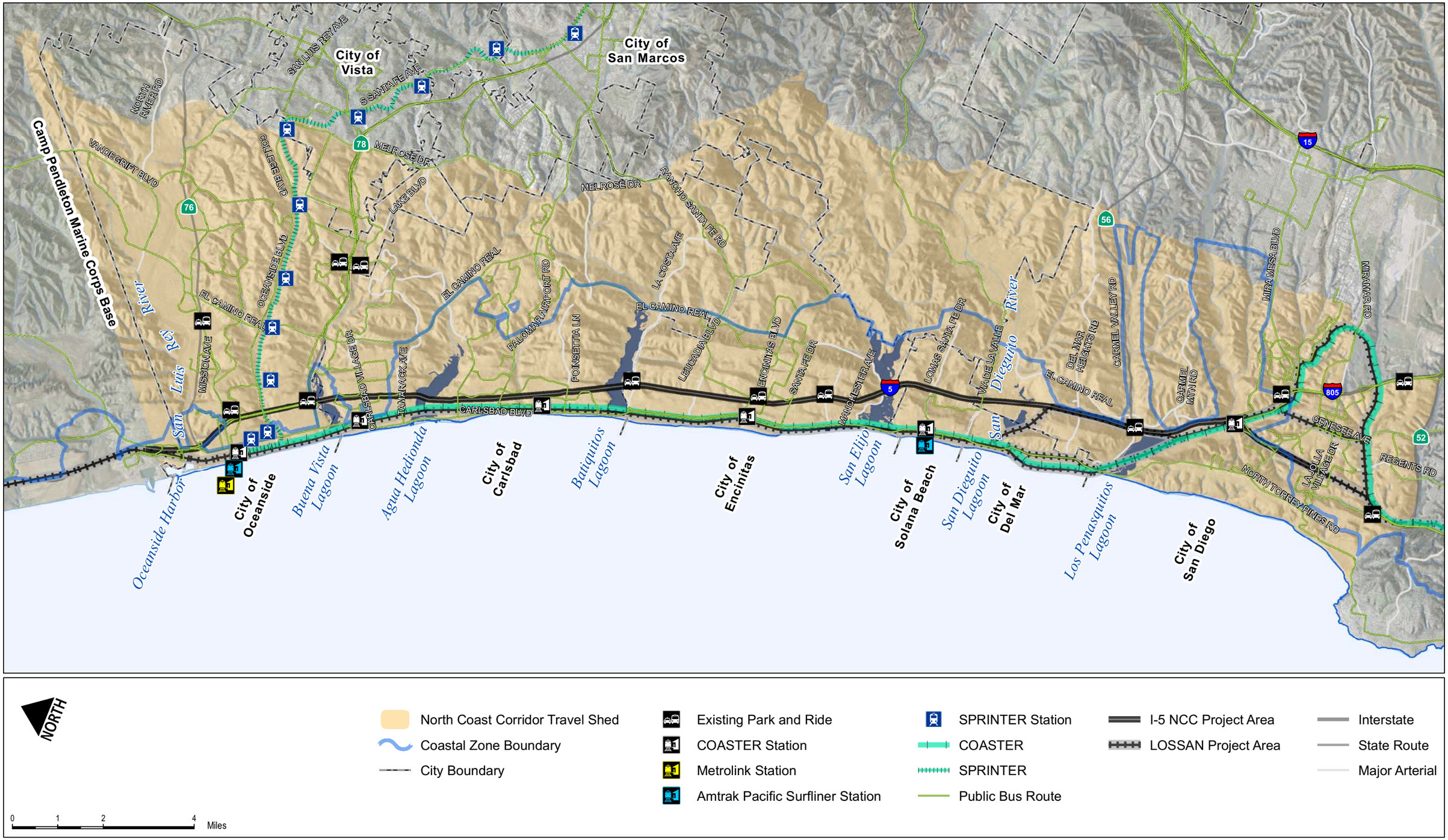

DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, USGS NHD Flowline, Imagery: DigitalGlobe March 2008

FIGURE 2-13

Rail and Transit Facilities (Existing)

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

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A study by the California High-Speed Rail Authority in 1998–1999 determined that the corridor was not appropriate for dedicated high-speed rail service, due to the highly constrained corridor and much larger footprint of high-speed rail, but conventional rail improvements in the corridor merited further study. Amtrak's California Passenger Rail System 20-Year Improvement Plan (2001) and the California State Rail Plan (2002) addressed proposed capital improvements and performance goals for the statewide rail system, including the LOSSAN corridor. These studies began to define alternatives for the corridor and outline a program-level approach for environmental review of LOSSAN corridor projects. Caltrans began a program-level environmental review of proposed LOSSAN corridor improvement alternatives from Los Angeles to San Diego in 2002 and released a Notice of Preparation (NOP), published a Notice of Intent (NOI) and conducted scoping activities. The following year, the LOSSAN Corridor Strategic Plan reviewed the corridor-wide alternatives. A Draft LOSSAN Programmatic EIR/EIS was released in August 2004. A Final Program EIR/EIS was released in September 2007 by Caltrans and their federal partner, the FRA. The program-level environmental document allowed lead agencies to consider a future program of long-term improvements to the LOSSAN rail corridor. Project-level environmental review will be conducted for site-specific decisions.

The LOSSAN Board of Directors and member agencies are a Joint Powers Authority (JPA) formed to oversee efforts to improve the rail corridor. The LOSSAN Corridorwide Strategic Business Plan was released in 2007 to provide a framework for future improvements for the entire 351-mile corridor.

The COASTER commuter rail, operated by NCTD, serves eight stations: Oceanside Transit Center, Carlsbad Village, Carlsbad Poinsettia, Encinitas, Solana Beach, Sorrento Valley, Old Town (San Diego), and Santa Fe Depot (downtown San Diego). With the exception of the two southern-most stations, the COASTER stations are located within the corridor. There are 22 to 26 COASTER train trips on weekdays, each with five car trains operating under approximately 30-minute headways during the morning and evening peak periods and less frequently during the off-peak. The average travel time between the Oceanside Transit Center and Santa Fe Depot is 57 minutes. There is less frequent service on Saturday and no service on Sunday except during special events such as professional football and baseball games. COASTER ridership has almost tripled since opening in 1995. The service has over 1.5 million annual passengers, or approximately 6,000 on an average weekday.[18]

Metrolink commuter rail service is operated by the Southern California Regional Rail Authority (SCRRA) and connects the Oceanside Transit Center with Orange, Los Angeles, and San Bernardino Counties. Metrolink trains only serve the Oceanside Transit Center, the northernmost station in the corridor. Metrolink provides 16 trips on weekdays. Approximately 1,450 passengers board Metrolink each day at the Oceanside Transit Center station.[19] On weekends, Metrolink runs a "Beach Train" which provides access from San Bernardino and Riverside to beaches in Orange County and Oceanside three times a day in each direction.

The Amtrak Pacific Surfliner provides intercity passenger rail service from downtown San Diego to Los Angeles Union Station and on to Santa Barbara and San Luis Obispo. Passengers on the Pacific Surfliner service can connect to interstate passenger rail service at Union Station. The route is the second busiest intercity rail route in the country with over 2.8 million passengers annually. There are 22 Pacific Surfliner trips on weekdays with frequencies of 60 to 90 minutes. Trains stop at the Oceanside Transit Center, Solana Beach, and Santa Fe Depot stations in San Diego County. The average travel time from San Diego to Los Angeles is approximately 2 hours and 45 minutes. During fiscal year 2008,

[18] *San Diego NCC – CSMP* (Chapter 4), July 2010.
[19] *San Diego NCC – CSMP* (Chapter 4), July 2010.

approximately 912,000 passengers boarded the Amtrak Pacific Surfliner at stations within the NCC, with 488,000 boardings at Solana Beach and 326,000 at Oceanside.[20]

Freight rail in the corridor services the movement of regional, interregional, interstate, and international goods. All freight services in the corridor are operated by BNSF Railway, which provides off-peak service from the Port of San Diego marine terminals to the Los Angeles area via four to eight daily trains. The shared use agreement between BNSF, SCRRA, and NCTD gives priority to passenger trains over freight trains. This agreement also dictates a "restricted freight period" during which BNSF movements are strictly limited. Future demand is dependent on market forces and may lead to increases in the number of trains or to increases in train length.

2.2.3.2 SPRINTER Rail Service

The east-west rail line in the NCC generally runs parallel to the SR-78 corridor. The SPRINTER passenger rail operates approximately 18 hours a day (with limited freight service operating three nights a week) and serves 13 stations on the 22-mile line between the Oceanside Transit Center and the Escondido Transit Center. Service is provided every 30 minutes in both directions. SPRINTER passenger service was initiated in March 2008 and ridership averaged about 7,000 passengers per day by April 2009.

Freight service on the line is temporally separated from SPRINTER service and authorized to operate on the line up to 5 nights a week between 10 P.M. and 4 A.M. Currently, the line is used two to three nights a week when trains comprised of 25 to 100 rail cars traverse the corridor over a three-hour period.

2.2.3.3 Bus Network: MTS, NCTD, Private Operators

Both public and private buses operate within the corridor. Public bus service is provided by the NCTD in the northern and central areas, and the San Diego Metropolitan Transit System (MTS) in the south. Improvements proposed within both the I-5 corridor and LOSSAN rail corridor will require coordination with NCTD and MTS to incorporate potential benefits to bus passengers. Private coach services, Greyhound, and airport shuttles all utilize I-5.

NCTD operates Breeze bus services in north San Diego County from Oceanside to Del Mar and University City. Service from the NCC reaches the cities of Escondido and San Clemente and the communities of Ramona and Fallbrook. Within the corridor, NCTD operates 26 bus routes and in 2005, ridership in the corridor was just under 7 million passengers. NCTD is conducting a comprehensive study of its transit service operations (the Mobility Plan), which will help the agency maximize ridership based on available funds. The goal of this study is to also increase transit efficiency in the corridor.

MTS provides transit services in the southern portion of the corridor throughout San Diego. Fifteen bus routes serve parts of the NCC. These routes carry approximately 2.6 million passengers annually.

COASTER Connection shuttles link the Sorrento Valley COASTER Station to employment sites in Sorrento Valley, Sorrento Mesa and North University City. Additional COASTER Connection shuttles serve the Carlsbad Poinsettia Station. COASTER Connection shuttles meet COASTER trains to facilitate convenient passenger transfers, which improves the viability of COASTER trains as a commute mode since many employment centers are not within walking distance to COASTER stations.

[20] *San Diego NCC – CSMP* (Chapters 2, 4), July 2010.

Bus routes travel along regional arterials and local streets, with most of the public bus service in the corridor providing local circulation, serving short-distance trips, and acting as a feeder service to COASTER and SPRINTER services as well as local activity centers such as Camp Pendleton, Plaza Camino Real and UCSD. With the exception of Route 101, which connects UTC and Oceanside via Coast Highway, most bus services do not focus on serving regional and interregional trips. Congestion has led to increased travel times for transit along I-5 and therefore decreased ridership.[21]

2.2.3.4 Vanpools and Carpools

Some existing facilities and programs in the corridor encourage vanpooling and carpooling. SANDAG's Regional Vanpool Program provides subsidies to vanpool participants to encourage ridesharing. Within the corridor, SANDAG subsidizes about 186 vanpools, which serve approximately 1,500 people each day. SANDAG also provides ride-matching services to encourage carpooling. Additionally, nine Park-and-Ride parking lots are located in the corridor to facilitate carpooling, vanpooling, and regional transit ridership. Carpool lanes are provided on I-5 from the I-805 interchange to the interchange with Manchester Avenue. Currently, about 1,100 vehicles use the HOV lanes northbound during the PM peak and about 1,200 vehicles use the HOV lanes southbound during the AM peak period.[22]

2.2.3.5 Transportation Demand Management (TDM)

In order to encourage the use of alternative modes, including carpool, vanpool, transit, biking and walking, SANDAG coordinates a variety of activities through the iCommute program. The goal of the program is to reduce congestion and air pollution while improving San Diegans' commutes. Program activities include carpool partner-matching, the Regional Vanpool Program, the iCommute Subsidy Program, the iCommute Guaranteed Ride Home Program, the Regional Bike Locker Program, the SchoolPool Program, employer outreach services, and marketing of TDM.

2.2.4 Existing Highway and Major Arterial Facilities

2.2.4.1 Interstate Highways: I-5

I-5 is the principle north-south transportation corridor in the western US and extends from the US/Mexico international border to the US/Canada international border. It has been named by the federal government as one of six "Corridors of the Future" based on its essential role in interstate and international commerce. In Southern California, I-5 connects San Diego County with Orange County and the Los Angeles metropolitan area. At the northern edge of the corridor, I-5 provides the primary access to Camp Pendleton, the country's second largest Marine Corps Base. Twenty miles south of the corridor, I-5 ends at the San Ysidro Port of Entry, the world's busiest international border crossing.

Most of I-5 within the project area was planned and constructed in the 1960s and 1970s as part of the Interstate Highway System. Within the corridor, I-5 has eight general-purpose lanes (four northbound and four southbound) that are separated by a median barrier. The freeway includes 16 local street interchanges (in the cities of San Diego, Solana Beach, Encinitas, Carlsbad, and Oceanside) and four freeway-to-freeway interchanges (at I-805, SR-56, SR-78, and SR-76). It acts as a local circulation and commuter link for coastal communities, a regional route to the Los Angeles Metropolitan area and both as a regional and international goods movement corridor. By the late 1980s, traffic congestion on I-5 had increased significantly due to population growth and shifts in the region's economy.

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[21] *San Diego NCC – CSMP* (Chapter 2), July 2010.
[22] *I-5 NCC Project Draft EIR/EIS* (Section 1-3), June 2010.

Within the corridor, I-5 serves as the transportation backbone, carrying over 80% of all trips in the corridor and more than 700,000 vehicle trips on an average weekday to and from local communities, employment centers, and recreational facilities.[23] Development of an additional north-south corridor to alleviate demand on I-5 is not feasible because of ROW limitations and natural resource constraints; thus, I-5 will be the only continuous north-south coastal route for the foreseeable future.

As congestion has grown on I-5, various studies have been initiated to determine how to best address corridor transportation. Between 1995 and 1997, Caltrans, SANDAG and other stakeholders conducted scoping meetings to initiate a Major Investment Study (MIS) for I-5, the LOSSAN rail corridor, parallel arterial streets and other transportation modes in the corridor. Based on these scoping meetings, SANDAG developed the North Coast Transportation Study, the MIS for the North Coast transportation corridor. The MIS identified a range of transportation deficiencies and alternatives in the corridor along I-5 and I-805 between SR-52 and the Orange County Line. Proposed improvements included the implementation of HOV lanes for the length of I-5 in the corridor, additional general-purpose lanes, and railway double tracking. Specific highway recommendations were developed concurrently by Caltrans in the Project Study Report (PSR) for the I-5 NCC and supporting technical and environmental studies.

SANDAG's 2002 Regional High Occupancy Vehicle/Managed Lane Study determined that HOV demand in the corridor would require a four-lane HOV facility by 2030. Caltrans redefined the proposed Project Study Report (PSR) alternative and HOV/Managed Lanes facility which was included in the 2030 RTP. Further technical study led to the inclusion of additional project elements such as the HOV Viaduct on I-5 over Sorrento Valley, new general-purpose lanes in some segments, and direct access ramps (DAR). In November 2004, voters approved a 40-year extension of the *TransNet* sales tax measure, which will generate $14 billion for regional transportation improvements. The I-5 NCC project was among those listed on the ballot measure to receive funding through this program. The 2006 SANDAG Managed Lanes Value Pricing Study deemed "value pricing" feasible for the corridor HOV lanes. Based on these studies, preparation of the I-5 North Coast Corridor Project Draft EIR/EIS was initiated and released for public review in June 2010.

Concurrently, the San Diego North Coast Corridor - Corridor System Management Plan (CSMP) was developed and released for public review in July 2010. A CSMP is required for the region to receive funds from California's Proposition 1B Corridor Mobility Improvement Account bond measure. Proposition 1B funding is directed to projects that move people and goods in California's most congested corridors. The CSMP looks at the entire integrated system of transit, local roadways, highways, pedestrians, and land use. The CSMP identifies priorities for each mode to phase in improvements across jurisdictions and is a system- and performance-based approach to addressing mobility in the corridor.

Following the construction of I-5, few improvements to the corridor were made; however, in recent years, there have been multiple improvement projects, including freeway widening at the I-5/I-805 merge area, the addition of I-5 HOV lanes from the I-5/I-805 merge north to the Via de la Valle interchange, construction of direct connector ramps (WB SR-56 to SB I-5) at the I-5/SR-56 freeway-to-freeway interchange, and other improvements. In January 2009, construction was completed to reconfigure the interchange at Lomas Santa Fe Drive and extend the existing HOV lanes north to the Manchester Overcrossing. Additionally, Intelligent Transportation Systems (ITS) have been introduced to the corridor to improve operations and capacity. The closest north-south highway alternative to I-5 is I-15, which parallels I-5 to the east. The I-5 and I-15 alignments are approximately 16 km (10 miles) apart, separated by topographical barriers, and the I-15 corridor is a separate travel shed. Travel sheds

[23] *San Diego NCC – CSMP* (Chapter 4), July 2010.

are defined considering origin and destination patterns, traffic volumes, land uses, terrain, route junctions, and modes of travel. I-5 as well as other regional arterials and state highways are shown in Figure 2-14.

2.2.4.2 Regional Arterials and State Highways

Regional arterials and state highways provide access to and within the corridor. Coast Highway and El Camino Real, two main north-south arterials supplement some of the local circulation provided by I-5. Before the construction of I-5, Coast Highway was the main north-south coastal route. After the development of I-5, control of the four-lane road was relinquished by the state to the jurisdictions it passed through: Oceanside, Carlsbad, Encinitas, Solana Beach, Del Mar, and San Diego. Correspondingly, the jurisdictions have renamed Coast Highway to the following: Carlsbad Boulevard (Carlsbad), Highway 101/First Street (Encinitas), South Highway 101 (Solana Beach), Camino del Mar (Del Mar), Pacific Highway (San Diego), and remains as Coast Highway in Oceanside. The road parallels I-5 about 0.8 km (0.5 miles) to the west, traversing many of the same water resources. Congestion on I-5 generally spills over onto Coast Highway creating corresponding congestion as drivers seek an alternate north-south coastal route; however, traffic calming, commercial development, and pedestrian enhancements in some areas have made Coast Highway a pedestrian oriented “Main Street” that does not provide a feasible alternative to I-5 for regional trips.

El Camino Real is the other north-south arterial in the corridor located 1 to 5 km (1 to 3 miles) east of I-5. It runs through the newer, developing inland areas of San Diego, Encinitas, Carlsbad, and Oceanside with extensive commercial development near interchanges with SR-76, SR-78, and SR-56. El Camino Real is not continuous throughout the corridor, which prevents it from being a feasible alternative to I-5 for regional and some local trips. Within the corridor, El Camino Real runs from south of SR 56 to Via de la Valle in San Diego, and then again from Manchester Avenue in Encinitas to SR 76 in Oceanside.

In addition to the north-south regional arterials, there are three east-west state highways that intersect I-5 and provide access to the corridor:

- **SR-76** is a four-lane expressway from I-5 east to North Santa Fe Avenue, and a four-lane conventional highway to Jeffries Ranch Road before tying into the existing two-lane winding road east to I-15 and beyond. SR-76 intersects I-5 near the northern edge of the corridor. It is listed on the California State Scenic Highway System and is an east-west corridor between the communities of western Riverside County and the work and recreational areas of north coastal San Diego County.
- **SR-78** is the principal east-west arterial for northern San Diego County linking I-5 with I-15 to the east and is located approximately 5 km (3 miles) south of SR-76. There is extensive commercial development along SR-78.
- **SR-56** is located 29 km (18 miles) south of SR-78 and is another east-west corridor that connects I-5 with I-15 to the east.

Numerous east-west arterials provide access to and from I-5 to the residential areas, places of employment, retail, and other destinations of the corridor. Many of these arterials have gaps due to environmental constraints. Capacity expansions or extensions are constrained by existing development and sensitive environmental resources.

2.2.4.3 Operations and Intelligent Transportation Systems (ITS)

In order to better manage the existing transportation infrastructure through reduced congestion and improved reliability, the region employs electronic communications, equipment and information processing. Within the NCC, multiple ITS elements are being used. Regional transportation data is distributed to travelers through 511, a phone- and web-based service, which allows travelers to make informed decisions. Ramp metering manages traffic flow onto freeways in order to balance traffic flows. Forty-one of the 58 local street entrances to I-5 in the corridor are currently metered. Four changeable message signs on I-5 also distribute travel information to drivers. Vehicle detection devices are located throughout the corridor to provide real-time data about the performance of I-5 to system operators.

2.2.5 Existing Coastal Access & Recreation Facilities

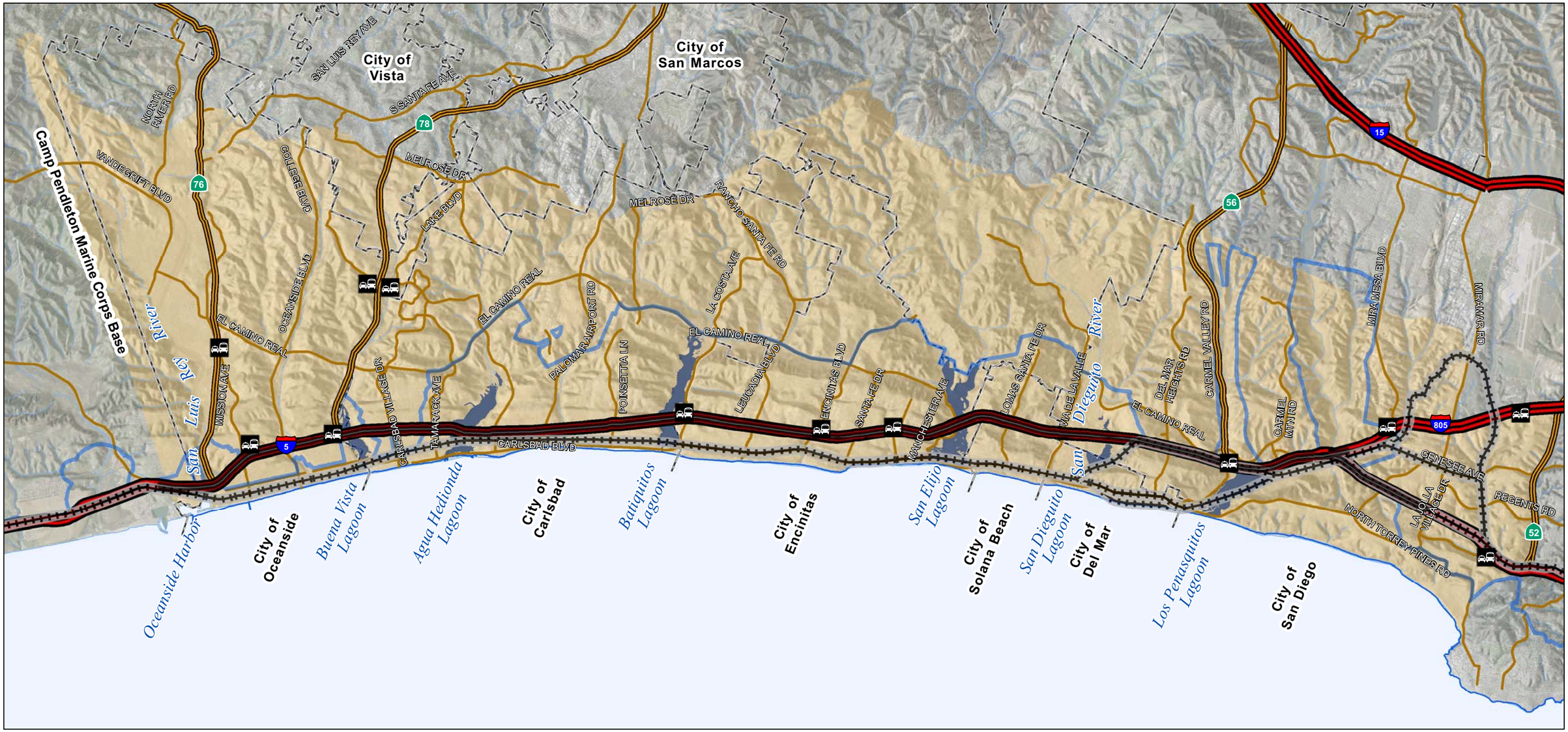
The corridor includes about 30 miles of Pacific Ocean coastline with world-renowned public beaches, coastal sandstone bluffs, and six lagoons that are part of river valley systems. Scenic public beaches include La Jolla Shores, Torrey Pines State Beach, Del Mar Beach, Cardiff State Beach, San Elijo State Beach, Moonlight State Beach, Leucadia State Beach, Carlsbad State Beach, and Oceanside State Beach. The beaches are used for surfing, swimming, tidepooling, camping, hiking, fishing, sports, and relaxation. Approximately 2 million trips to corridor beaches are made each year (one-half of all beach trips in San Diego County). Existing primary access to these coastal areas is by private automobile. Nineteen of the 30 interchanges on I-5 in the travel shed provide direct access to the corridor's beaches and harbors. While the majority of access to the corridor's coastal areas is provided by vehicle (approximately 70%), all of the travel shed's north-south passenger rail services also support access to these coastal beaches and/or lagoons, with some circulation and local access obtained by foot and bicycle, as discussed in the following section.

The lagoons in the corridor have varying levels of recreational and educational facilities, including trails and interpretive facilities. Many of the corridor lagoons provide coastal and upland recreation opportunities. Additional upland recreation areas within the corridor include San Luis Rey River Trail, Los Peñasquitos Canyon Preserve, Torrey Pines State Reserve, and San Dieguito River Park, in addition to several other smaller community parks and open spaces.

2.2.5.1 Bicycle and Pedestrian Facilities

Within the NCC there is an existing bicycle and pedestrian network that provides access to the coast and other upland recreation areas. Like the corridor's arterial network, gaps and barriers in the routes prevent fulfilling many local and longer distance trip needs. According to SANDAG's 2030 RTP, existing primary bicycle and pedestrian routes include Coastal Rail Trail, Camp Pendleton Trail, San Luis Rey River Trail, El Camino Real Bikeway, Palomar Airport Road/San Marcos Boulevard Bikeway, La Costa Avenue/Rancho Santa Fe Road Bikeway, Mid County Bikeway, SR-56 Bikeway, and the Central Coast Corridor (see Figure 2-15). These routes connect public beaches and parks, residences, town centers, transit centers, and other activity centers.

SANDAG has developed a San Diego Regional Bicycle Plan, which will encourage the development of a unified bicycle system throughout the region. The goal of the plan is to connect local and regional activity centers, transit stations and regional trail networks while serving the needs of all bicycle riders.



NORTH

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

0 1 2 4 Miles

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

FIGURE 2-14

Highway and Major Arterial Facilities (Existing)

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NORTH

North Coast Corridor Travel Shed
City Boundary
Coastal Zone Boundary

Bicycle and Pedestrian Routes
Primary Existing Bicycle Facility
Secondary Existing Bicycle Facility

I-5 NCC Project Area
LOSSAN Project Area

Interstate
State Route
Major Arterial

0 1 2 4 Miles

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

FIGURE 2-15

Primary Bicycle and Pedestrian Routes

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

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The Coastal Rail Trail, once fully completed, will provide a continuous north-south Class I bike path through the corridor with direct access to coastal facilities. The Coastal Rail Trail is part of the Pacific Coast "Bike"-Centennial Bicycle Route, which reaches the length of the California coastline. This bikeway serves many users: short segments serve as ideal commuter access between adjoining communities; longer segments serve to accommodate the recreational bicycle users as well as some commuters; and the full length of this bikeway within San Diego County serves the inter-regional user.

The California Coastal Trail is intended to be a continuous 1,200-mile public ROW along the California coastline. Within the corridor the trail exists and/or is planned alongside the Coastal Rail Trail (see Figure 2-15). The trail is intended to foster appreciation and stewardship of the scenic and natural resources of the coast through hiking and other complementary modes of non-motorized transportation. A primary goal of the trail as articulated in Completing the California Coastal Trail (Coastal Conservancy 2003) is to "create linkages to other trail systems and to units of the State Park system, and use the Coastal Trail system to increase accessibility to coastal resources from urban population centers." The Coastal Commission's Public Access Plan indicates that approximately 69% of the California Coastal Trail is completed in San Diego County, with approximately 20 miles of missing link located in North County at Camp Pendleton.

Within the corridor, many pedestrian and bicycle routes cross over or under the I-5 highway corridor and the LOSSAN rail corridor facilities. There are a total of 37 such I-5 crossings and 33 rail crossings. The quality of the crossings varies. Physical crossings are not provided at all pedestrian/bicycle route and rail/freeway facility intersections. This leads to dead-ends and in some cases, unpermitted track crossings.

Bicycle paths, lanes, and routes providing differing levels of separation from automobiles, all exist in the corridor. Some bicycle access is also allowed on the I-5 freeway shoulders, specifically between Sorrento Valley Road and Genesee Avenue in San Diego and from Vandegrift Boulevard to Las Pulgas Road north of Oceanside.

Transit providers in the corridor accommodate bicycles on their systems. This includes Amtrak, COASTER and SPRINTER, and MTS and NCTD buses. The San Diego NCC coastline is reasonably well equipped to accommodate non-motorized travel modes; however, a number of bike and pedestrian routes are still precluded from crossing over or under the I-5 and LOSSAN rail corridor facilities.

2.2.5.2 Transit and Highway Access

Most transit trips in the NCC are commuter trips, but transit infrastructure is in place that could serve tourist and recreational trips accessing coastal areas. All COASTER commuter rail stations in the corridor, with the exception of Sorrento Valley, are located within blocks of a coastal beach or lagoon; however, most service is provided during weekday commute hours and, therefore, is not presently conducive to facilitating access to the beach. Most corridor bus routes provide local and circulator service. Local east-west bus service enhances access to coastal communities west of I-5 from inland areas and provides an alternative mode of travel to passenger rail service. Express or regional bus service to the coast, however, is minimal. In addition, most corridor bus routes operate on headways of 30 minutes or longer, making them less desirable for the recreational rider. Some routes have Saturday service. Although infrastructure is there, public transit is not currently a viable mode for most people to access coastal resources. Additionally, service frequencies are limited by constraints on transit operations funds.

Instead, most coastal access is facilitated by private automobiles. As noted previously, I-5 has frequent exits that provide direct access to coastal facilities. While demand for access to coastal areas is

distributed over the 30-mile coastline in the corridor, during periods of high visitation, corresponding demand can lead to congestion on I-5 and thus impede access to corridor coastal resources. Coast Highway provides local coastal access parallel and adjacent to coastal many facilities. Most Coast Highway users access this route from I-5 and/or east-west arterials.

2.2.6 Existing Natural Resources

The NCC includes approximately 30 miles of coastline in northern San Diego County, a region recognized for a number of unique and significant marine and environmentally sensitive resource areas. The coastal watersheds, lagoons, and upland areas in the corridor consist of a range of diverse habitats and ecosystems that support a variety of plant and wildlife species. The corridor's most significant natural resource areas, such as the corridor's six coastal lagoons, also support some of the region's most significant passive and active coastal recreational opportunities for San Diego residents and visitors. This section briefly describes the most prominent marine and environmentally sensitive habitat areas in the corridor, which are discussed in more detail in Chapter 5 of the TREP/PWP.

2.2.6.1 Hydrology and Water Quality

Surface hydrology within the corridor is primarily influenced by the lagoons, creeks, and San Luis Rey River. The corridor improvement areas cross the following four (of the eleven) hydrologic units (HU) within the San Diego Regional Water Quality Control Board (RWQCB) Basin:

- The **San Luis Rey** watershed is the largest of the four HUs within the corridor and is the least developed; however, development within this watershed is expected to increase from approximately 16% to 23% by 2015[24]. The entire basin is drained by the San Luis Rey River.
- The **Carlsbad HU** is comprised of seven sub-basins that include San Elijo Lagoon (Escondido Creek), Cottonwood Creek, Batiquitos Lagoon (San Marcos Creek), Encinas Creek, Agua Hedionda Lagoon (Agua Hedionda Creek), Buena Vista Lagoon (Buena Vista Creek), and Loma Alta Creek. The freeway and rail bisect four lagoons in this HU: San Elijo Lagoon, Batiquitos Lagoon, Agua Hedionda Lagoon, and Buena Vista Lagoon. All four of the lagoon crossings, including Loma Alta Creek, are on bridge structures. Cottonwood Creek crosses under the freeway in a concrete culvert south of Encinitas Boulevard, and Encinas Creek crosses the corridor in a concrete box culvert south of Palomar Airport Road. Development within the Carlsbad HU is projected to increase from 56% to 70% by the year 2015[25].
- The **San Dieguito HU** drains into San Dieguito River. The developed area within the hydrologic unit is projected to increase from approximately 26% to 38% by 2015[26].
- The corridor begins near the middle of the **Los Peñasquitos HU** and crosses Carroll Canyon Creek, Los Peñasquitos Creek, and Carmel Valley Creek. Existing facility crossings occur via bridge structures with the exception of Carmel Valley Creek, which currently drains through a concrete box culvert. The developed area in this HU is projected to increase from 58% to 66% of the total watershed by the year 2015[27].

The San Diego RWQCB Basin Plan (Basin Plan) defines "Beneficial Uses" for water bodies as those necessary for the survival or well-being of people, plants, and wildlife. These uses promote tangible and intangible economic, social, and environmental goals.

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[24] *I-5 NCC Project Draft EIR/EIS* (Section 3-10), June 2010.
[25] *I-5 NCC Project Draft EIR/EIS* (Section 3-10), June 2010.
[26] *I-5 NCC Project Draft EIR/EIS* (Section 3-10), June 2010.
[27] *I-5 NCC Project Draft EIR/EIS* (Section 3-10), June 2010.

All of the inland waterways provide beneficial uses or have the potential to provide beneficial uses. These uses include agricultural supply, industrial services supply, contact and noncontact recreation, warm freshwater habitat and wildlife habitat. Exceptions are Encinitas and Loma Alta Creeks, which are not designated for agricultural supply or industrial services supply. Additional beneficial uses include spawning, reproduction, and/or early development for San Dieguito River, and cold freshwater habitat for Soledad and Corral Canyon Creeks and San Dieguito River. Los Penasquitos Creek is designated for preservation of biological habitats of special significance, and beneficial use for rare, threatened, and endangered species is also assigned to Carroll Canyon Creek and San Luis Rey River. Beneficial use for hydropower generation is assigned to San Luis Rey River, and beneficial uses for groundwater resources associated with Loma Alta Creek and Encinas Creek include municipal and domestic supply (for both creeks) and industrial services (Encinas Creek only).

Beneficial uses for the lagoons in the corridor generally include contact and noncontact recreation; preservation of biological habitats of special significance, estuarine habitat (potential estuarine habitat for Buena Vista Lagoon), marine habitat, wildlife habitat, rare, threatened and endangered species; and fish migration and spawning, reproduction, and/or early development (with the exception of Buena Vista Lagoon, which is the only lagoon with the beneficial use of warm freshwater habitat). Beneficial uses for Los Peñasquitos Lagoon and Agua Hedionda also include shellfish harvesting, with additional beneficial uses assigned to Agua Hedionda for industrial services supply, commercial and sport fishing, and aquaculture. Loma Alta Slough is designated for contact and noncontact recreation, estuarine, marine and wildlife habitat, and rare, threatened and endangered species. The mouth of San Luis Rey River is also designated for contact and noncontact recreation, marine and wildlife habitat, and rare, threatened and endangered species, as well as for fish migration.

2.2.6.2 Corridor Lagoons

San Diego's lagoons provide habitat for sensitive animals and plants, stopping points for migratory birds, natural water treatment and flood prevention, scenic beauty, opportunities for passive recreation, and many other benefits; however, portions of the lagoons were filled to construct transportation facilities and other development, which has led to increased sedimentation, and flash flooding. In addition, the introduction of treated sewage effluent and other factors has led to further degradation. In response to this, lagoon restoration projects have been planned, and in some cases, implemented to return lagoons, as much as feasible, to their natural state. The six lagoons in the north coast corridor are Los Peñasquitos, San Dieguito, San Elijo, Batiquitos, Agua Hedionda, and Buena Vista. Three of the six lagoons have ongoing restoration programs. Restoration plans for the other three are being developed. Summary information about the status of each lagoon is provided in Table 2-5.

Los Peñasquitos Lagoon

Los Peñasquitos Lagoon is located in the northwest portion of the City of San Diego. The lagoon area is owned entirely by public entities such as the State of California, City of San Diego, San Diego Metropolitan Transit Development Board, Caltrans, and San Diego Gas & Electric (SDG&E). The southernmost portion of the lagoon is part of the Torrey Pines State Reserve, and beach areas north and south of the lagoon mouth are State Parks recreation areas.

Los Peñasquitos Lagoon includes approximately 460 acres of tidal wetlands. The lagoon watershed includes Carroll Canyon/Sorrento Creek, Los Peñasquitos Creek and Carmel Creek. Habitats present in, or within the vicinity of, Los Peñasquitos Lagoon primarily include coastal salt marsh, estuarine, coastal and valley freshwater marsh, southern riparian scrub, beach, Diegan coastal sage scrub, southern maritime chaparral, and valley and foothill grasslands. The lagoon provides important wildlife habitat for special-status species including Belding's savannah sparrow, light-footed clapper rail, and

Western snowy plover, migratory birds, a variety of mammals, and nursery grounds for many fish species.

The Los Peñasquitos Lagoon Enhancement Plan was developed in 1985 by the California Coastal Conservancy with partial funding provided by local developers and homeowner associations. The enhancement plan was certified by the Coastal Commission as a part of the City of San Diego's North City Land Use Plan. The management program called for water quality monitoring and mechanically opening the lagoon mouth to prevent poor water quality from killing channel organisms. The Pacific Estuarine Research Laboratory (PERL), based at San Diego State University, was contracted to monitor lagoon water quality. This effort led to the opening of the lagoon mouth in the early 2000s which was approved by the Coastal Commission pursuant to coastal development permit #6-02-13. The Los Peñasquitos Lagoon Foundation continues to work to keep the lagoon mouth open, monitor physical changes, restore habitat, and improve channel circulation.

San Dieguito Lagoon

San Dieguito Lagoon is located in the cities of San Diego and Del Mar and is owned by a variety of private and public entities. Public ownership includes the State of California, cities of San Diego and Del Mar, the 22nd District Agricultural Association, NCTD, Caltrans, San Dieguito River Valley Land Conservancy, and the Joint Powers Authority (JPA). A large portion of the lagoon is owned by the California Department of Fish and Game (CDFG) and is maintained as a State Ecological Reserve, and much of the lagoon area along the San Dieguito River is owned by a JPA and is maintained as the San Dieguito River Park.

San Dieguito Lagoon is approximately 456 acres. The lagoon watershed includes the San Dieguito River and a number of drainages along I-5 that convey water to the river. Habitats present in or within the vicinity of San Dieguito Lagoon primarily include open water, estuarine/palustrine flats, salt marsh, brackish/freshwater marsh, coastal salt marsh, riparian scrub, and Diegan coastal sage scrub. The lagoon habitat supports special-status wildlife species including Belding's savannah sparrow and light-footed clapper rail.

The San Dieguito Lagoon Restoration Project is currently underway and has restored 115 acres of coastal wetlands. The restoration project is designed to restore the aquatic functions of the lagoon through excavation of uplands and to expand the tidal basin and create subtidal and intertidal habitats both east and west of I-5 and permanent inlet maintenance. Upon completion, the lagoon will serve as a fish hatchery and a refuge for migratory waterfowl as well as open recreational space. Southern California Edison (SCE) and the San Dieguito River Park Authority are partners on the project, which was required to mitigate impacts on marine fish populations from the San Onofre Nuclear Generating Station (SONGS). A Coastal Development Permit (6-04-88) was issued by the California Coastal Coastal Commission in October 2005. Construction began in fall 2006, and the restoration project is expected to be completed in 2010. Maintenance of the functioning wetland is the responsibility of SCE until 2050.

San Elijo Lagoon

San Elijo Lagoon is located in the City of Encinitas just north of Solana Beach and is primarily owned by public agencies including the State of California, County of San Diego, City of Solana Beach, the San Elijo Lagoon Conservancy, NCTD and Caltrans. The lagoon is part of the larger San Elijo Lagoon Ecological Reserve that includes approximately 1,000 acres of wetland and upland habitat. The reserve is operated by CDFG and includes the San Elijo nature Conservancy Center.

TABLE 2-5: LAGOON SUMMARY TABLE

	Los Peñasquitos	San Dieguito	San Elijo	Batiquitos	Agua Hedionda	Buena Vista
Lagoon Owner / Operator	State Parks, City of San Diego, NCTD, Coastal Conservancy, Los Peñasquitos Lagoon Foundation	CDFG, San Dieguito River Park Joint Powers Authority, County of San Diego, City of San Diego, 22nd Agricultural District, NCTD, Private	CDFG, County of San Diego, San Elijo Conservancy	State Lands Commission, CDFG, Port of Los Angeles, Batiquitos Foundation	CDFG, SDG&E, Leases to YMCA, City of Carlsbad, Private	CDFG, Buena Vista Lagoon Foundation, Private
Size	460 acres	456 acres	491 acres	600 acres	286 acres	203 acres
Watershed Features	Carroll / Soledad Canyon Creek, Los Peñasquitos Creek, Carmel Creek	San Dieguito River, Drainages along I-5	Escondido Creek, San Elijo Creek	San Marcos, Encinitas, Encinas Creeks	Agua Hedionda Creek	Buena Vista Creek
Habitat	Coastal salt marsh, estuarine, coastal / valley freshwater marsh, southern riparian scrub, beach, Diegan coastal sage scrub, southern maritime chaparral, valley and foothill grasslands	Open water, estuarine / palustrine flats, salt marsh, brackish / freshwater marsh, coastal salt marsh, riparian scrub, Diegan coastal sage scrub	Open water (estuarine and fresh), sand / mudflats, coastal salt marsh, fresh / brackish marsh, riparian, Diegan coastal sage scrub	Eelgrass, with mud flats, coastal salt marsh, brackish emergent marsh, riparian, Diegan coastal sage scrub	Open water, brackish / freshwater, mudflats, estuarine flats, patchy salt marsh areas, riparian, Diegan coastal sage scrub, eelgrass	Estuarine, freshwater, coastal and freshwater marsh, southern riparian scrub, eucalyptus woodland
Special-Status Species	Belding's savannah sparrow, light-footed clapper rail, Western snowy plover	Belding's savannah sparrow and light-footed clapper rail	California least tern, Belding's savannah sparrow, California gnatcatcher, California black rail	California least tern, western snowy plover, Belding's savannah sparrow, light-footed clapper rail	Belding's savannah sparrow, California gnatcatcher, light-footed clapper rail	Belding's savannah sparrow, California gnatcatcher, light-footed clapper rail
Past & Present Restoration Efforts	Lagoon Enhancement Plan 1985	SCE Restoration Initiated in 2006	San Elijo Lagoon Restoration Project (SELRP) Planning Underway	Lagoon Enhancement Project, Port of Los Angeles / Long Beach 2006	Dredging and Eelgrass Planting; Removal of Toxic Algae	Buena Vista Lagoon Foundation Feasibility Study Underway
Long-term Monitoring/ Management	Tijuana Estuarine Group Monitoring, Lagoon Outlet Breaching	Coastal Commission Monitoring Restoration Project; Lagoon & Outlet Dredging	San Elijo Lagoon Foundation Monitoring/ Management	Port of Los Angeles 10 year Monitoring of Enhancement Project	Removal / Monitoring of Toxic Algae; Maintenance Dredging	CDFG Ecological Reserve Monitoring/ Management
Land Use	Open Space, utility corridors, municipal infrastructure (stormwater outfalls & sewer lines), small-scale restoration sites.	Habitat Restoration, CDFG Ecological Reserve, JPA River Park	Preserved wetland & upland areas, passive recreational uses, fishing, horseback riding	Ecological Reserve, Recreation (trails), Interpretive Center (The Foundation), Ag Production	Habitat Preservation, Commercial / Industrial (Encina Power Plant; desalination plant), recreation (YMCA camps, water sports, fishing)	Recreation; fishing, hiking, wildlife viewing, nature tours Ecological Preservation
Transportation Facility Crossings	Railroad, I-5, Coast Hwy 101	Jimmy Durante Blvd, Coast Hwy 101, El Camino Real, I-5	Railroad, Hwy 101, I-5	Coast Hwy 101, I-5, Railroad	Carlsbad Blvd / Coast Hwy, Railroad, I-5	Railroad, Carlsbad Blvd / Coast Hwy, I-5 El Camino Real

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San Elijo Lagoon area consists of approximately 491 acres. The lagoon watershed encompasses all drainages that convey water into San Elijo Lagoon including Escondido Creek and San Elijo Creek. Habitats present in, or within the vicinity of, San Elijo Lagoon primarily include open water (estuarine and fresh), sand/mudflats, coastal salt marsh, fresh/brackish marsh, riparian, and Diegan coastal sage scrub. In addition, San Elijo Lagoon and its upland habitat support a number of special-status wildlife species including California least tern, Belding's savannah sparrow, California gnatcatcher, and California black rail.

Stakeholders, including the San Elijo Lagoon Conservancy, SANDAG, and Caltrans, are currently coordinating efforts to prepare a draft EIR for the San Elijo Lagoon Restoration Project. Plans include restoration of the hydrological regime and the marsh habitat and conversion from mudflats and low marsh habitat to middle and high marsh habitat. Relocating the lagoon inlet at Coast Highway will enhance lagoon functions. Additionally, the restoration project will increase tidal muting effects and enhance coastal lagoon habitat, particularly the mud flats.

Batiquitos Lagoon

Batiquitos Lagoon is located in the City of Carlsbad and is owned by a variety of private and public entities. Public ownership includes the State of California (CDFG) and the State Lands Commission. The lagoon is maintained as a State Ecological Reserve by CDFG; however, public recreational use of the lagoon area is limited to trails and an interpretative center operated by the Batiquitos Lagoon Foundation and located on the northern edge of the eastern basin.

Batiquitos Lagoon is comprised of approximately 600 acres with a watershed that includes all drainages that feed the lagoon including San Marcos and Encinas Creeks. Habitats within or in the vicinity of Batiquitos Lagoon primarily include open water that supports eelgrass, with mud flats, coastal salt marsh, brackish emergent marsh, riparian, and Diegan coastal sage scrub at its perimeter. The large, open-water lagoon provides important habitat for fish, waterfowl, and shorebirds. Batiquitos Lagoon also provides important habitat supporting special-status wildlife species such as California least tern, western snowy plover, Belding's savannah sparrow and light-footed clapper rail. The slopes of the lagoon are also important wildlife corridors for both large and small mammals.

A large restoration project in Batiquitos Lagoon was completed in 1996 to permanently restore tidal influence to the lagoon while protecting important habitat. Restoration and ten years of maintenance and monitoring was completed by the Port of Los Angeles/Long Beach as mitigation for loss of habitat in the Port's Outer Los Angeles Harbor. A Coastal Development Permit (6-90-219) was issued in 2006 for the restoration and enhancement plan. The restoration project included 1) a rock tidal inlet structure to allow uninterrupted tidal flushing; 2) dredging to create habitats and maintain an open inlet; 3) replacement of two highway bridges (on Pacific Coast Highway); 4) scour protection for the I-5 and LOSSAN rail lagoon crossings; and 5) the creation and monitoring of least ten nesting sites. The CDFG is the long-term manager of the nature reserve.

Agua Hedionda Lagoon

Agua Hedionda Lagoon is located in the City of Carlsbad and is owned by a variety of private and public entities. Public ownership includes the State of California, NCTD and Caltrans. CDFG maintains the eastern portion of the lagoon as the Agua Hedionda Lagoon Ecological Reserve. Use of the lagoon is unique from that of the other corridor lagoons in that commercial, industrial and active recreational uses occur in the lagoon.

Agua Hedionda Lagoon is approximately 286 acres and is located in the Agua Hedionda and Macario Creek watershed. The lagoon is an important cultural, economic and environmental resource that

provides critical habitat for migratory and resident birds and fish. Habitats present in, or within the vicinity of, Agua Hedionda Lagoon are primarily open water, brackish/freshwater, mudflats, estuarine flats, patchy salt marsh areas, riparian, Diegan coastal sage scrub, and eelgrass. The lagoon habitat supports special-status wildlife species such as Belding's savannah sparrow, California gnatcatcher, and light-footed clapper rail.

A restoration feasibility analysis for the lagoon was completed in 2004. Although, the Agua Hedionda Lagoon Foundation is active in preservation and maintenance of the lagoon, a major lagoon restoration project has yet to occur. The Foundation has expressed a preference for keeping the existing open water regime at the lagoon.

Buena Vista Lagoon

Buena Vista Lagoon is located in the cities of Carlsbad and Oceanside and is owned by a variety of private and public entities. Public ownership includes the State of California, cities of Carlsbad and Oceanside, NCTD and Caltrans. The lagoon is part of the Buena Vista Lagoon Ecological Reserve that is maintained by CDFG and is used for a variety of recreational activities.

Buena Vista Lagoon consists of approximately 203 acres and is located in the Carlsbad watershed that drains Buena Vista Creek. The lagoon itself contains the only Army Corps of Engineers jurisdictional wetland/waters within the watershed. Buena Vista Lagoon is a freshwater lagoon that, for the most part, is not connected to the ocean except through a system of tide gates. Habitat present within or in proximity to the Buena Vista Lagoon consists primarily of estuarine, freshwater, coastal and freshwater marsh, southern riparian scrub, and eucalyptus woodland. Bird and waterfowl nesting islands were created in the lagoon in 1983. The lagoon provides important habitat supporting special-status wildlife species such as Belding's savannah sparrow, California gnatcatcher, and light-footed clapper rail.

The Buena Vista Lagoon Foundation and its partners have completed a strategic plan and a restoration feasibility analysis that proposed potential hydraulic regimes—saltwater, freshwater, or mixed water—and project alternatives. Restoration alternatives are being further examined as part of an ongoing lagoon restoration project EIR/EIS. Completion of this document is expected in 2011 with final engineering, permitting, and construction to follow as funding allows.

2.2.6.3 Existing and Potential Habitat Areas

Riparian/Wetland Habitat

In addition to the large coastal lagoon system discussed above, the corridor includes a number of significant coastal and inland waterways that support sensitive habitat. These include Cottonwood Creek, Moonlight Creek, Encina Creek, Loma Alta Creek, and San Luis Rey River.

Cottonwood Creek is a small creek that flows intermittently above- and below-ground through Encinitas between San Elijo and Batiquitos Lagoons. Cottonwood Creek is primarily channelized or underground near I-5; however, several drainages feed into Cottonwood Creek from the east side of I-5 to the west side where the outlet to the Pacific Ocean has recently been restored. Restoration efforts have also included the creation of Cottonwood Creek Park west of I-5. In this area, the creek channel has been restored to an aboveground channel between I-5 and the ocean. Moonlight Creek is a small tributary in Cottonwood Creek Park that runs parallel to and west of I-5. Moonlight Creek primarily conveys urban runoff from both sides of I-5 into Cottonwood Creek. Cottonwood Creek and Moonlight Creek flow through an urbanized section of Encinitas. Cottonwood Creek often flows through culverts and channels near I-5 and does not provide much flood relief, water quality improvement, or wildlife habitat until reaching the newly restored channels in Cottonwood Creek Park. Moonlight Creek supports some

freshwater marsh habitat and southern willow scrub and provides habitat to riparian bird species and limited water quality and flood relief benefits.

The Encina Creek watershed includes the creek itself and a long earthen drainage parallel to I-5 that is fed mostly by urban and freeway runoff, which then flows into the creek through a concrete channel. Encina Creek contains many invasive plant species and has been channelized along some of its length. The drainage paralleling I-5 supports cattails, amphibians, and bird species. Encina Creek provides limited wildlife habitat and water quality and flood relief; however, because it is disturbed, the function and value of the habitat is limited.

Loma Alta Creek is highly disturbed and is fed by several concrete lined ditches. The creek extends from north of the California Street interchange to Mission Avenue. There is a riparian area just east of I-5 and north of Oceanside Boulevard that ultimately flows into the creek. Loma Alta Creek provides a limited amount of water quality filtration and flood relief; however, the creek's concrete lining and highly disturbed nature of the habitat minimizes these benefits.

San Luis Rey River is a significant resource and riparian feature within the corridor and is one of the few perennial rivers in San Diego County. The San Luis Rey River reach located within the corridor is a combination of open water habitat, freshwater marsh, arundo scrub, and riparian habitat that supports a variety of common and sensitive wildlife species. San Luis Rey River also plays an important role in flood relief and improves water quality, which results from filtering by freshwater marsh species.

Upland Habitat

The San Diego coastal climate supports a wide variety of sensitive upland habitat areas. The majority of the significant habitat within the corridor is contained in and around the six coastal lagoons, on undeveloped hillside areas and mesas, within the inland waterways, and along the shoreline. In addition to the plant communities present, there are several communities with little or no vegetation. These include mud flat, salt flat, open water, and unvegetated or other waters of the US. Sensitive upland habitats identified in the corridor include Diegan Coastal sage scrub, baccharis scrub, maritime succulent 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. Although not commonly considered a sensitive habitat type, nonnative grassland and nonnative woodland areas often provide valuable nesting, roosting and foraging habitat for raptors, and, therefore, some areas may be considered sensitive habitat areas and subject to resource protection policies.

Plants

The mosaic of vegetation communities that occur in the corridor support a number of protected special-status plant species. Each of the six coastal lagoons support coastal sage scrub, coastal bluff scrub, chaparral, native grasslands, bluff, and dune habitats, which are particularly recognized for supporting special-status plant species although the occurrence of such plants is not always associated with these habitats. Special-status plant species that occur within the corridor near the improvement areas that are listed as California Department of Fish and Game (CDFG) species of special concern, US Fish and Wildlife Service (USFWS) candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants include California adolphia, south coast saltscale, southern tarplant, Orcutt's pincushion, summer holly, sea dahlia, San Diego barrel cactus, Del Mar Mesa sand aster, Torrey pine, Nuttall's scrub oak, and Estuary seablite. In addition to these special status species, a number of federal- and/or state-listed threatened and endangered species have been observed in the corridor near the improvements areas. These include the Del Mar manzanita, San Diego ambrosia, Encinitas baccharis, thread-leaved brodiaea, San Diego button celery, spreading navarretia, and San

Diego mesa mint. Section 5.5 includes a list of special-status, federal- and/or state-listed plant and animal species and a general description of their location in the corridor and listing status.

Wildlife

Resources along the corridor support a number of sensitive wildlife species that have special status and/or recognition by federal and state resource agencies. Federal-listed wildlife include the coastal California gnatcatcher; state- and federal-listed wildlife species include the least Bell's vireo, southwestern willow flycatcher, least tern, light-footed clapper rail, Western snowy plover, tidewater goby, Southern steelhead trout, and Pacific pocket mouse; State-listed wildlife include the Belding's savannah sparrow and peregrine falcon; and Fully Protected Species include the clapper rail, least tern and peregrine falcon. Coastal sage scrub, southern maritime chaparral and/or maritime succulent scrub has the potential to support San Diego horned lizard, Coronado Island skink, orange-throated whiptail, rufous-crowned sparrow, raptors, loggerhead shrike, desert woodrat, and the San Diego pocket mouse.

Many bird species that migrate along the Pacific Coast flyway use the lagoons to stop over and forage. Several of these bird species are considered sensitive at their breeding grounds, but not necessarily along their migration routes. These include the white pelican, long-billed curlew, and double crested cormorant. The white-tailed kite, a California Fully Protected (CFP) Species and Species of Special Concern (SSC), occasionally forages within the corridor, often over the agricultural fields. Nest sites are not known to occur within or in proximity to the TREP/PWP improvement areas. Other sensitive species known to occur in the corridor are the, two-striped garter snake, least bittern, great blue heron, great egret, osprey, northern harrier, sharp-shinned hawk, Cooper's hawk, long-billed curlew, California horned lark, loggerhead shrike, and Yellow warbler. Section 5.5 includes a list of special-status, federal- and/or state-listed plant and animal species and a general description of their observed location in the corridor and listing status.

The corridor also contains critical habitat for the least Bell's vireo, southwestern willow flycatcher, tidewater goby, and California gnatcatcher. Vernal pools located in proximity to the corridor may contain San Diego and Riverside fairy shrimp. Habitat areas along the creeks, rivers and lagoons and adjacent upland areas also provide wildlife corridors from inland San Diego County to the coastal region and connect large areas of natural open space that allow for wildlife movement. The lagoons include potential Essential Fish Habitat (EFH) for northern anchovy, Pacific sardine, and jack mackerel. Open water in the San Luis Rey River may also provide EFH.

3.0 THE CORRIDOR PROBLEM AND VISION

The regional transportation system's vision, goals, and objectives provide the foundation for the mobility, access, and resource vision for the North Coast Corridor (NCC). This chapter describes the NCC vision that grew from the desire of SANDAG, Caltrans, and local jurisdictions to address the transportation, coastal access, and resource problems in the corridor. The chapter also identifies the transportation and resource deficiencies in the corridor, describes the corridor vision and goals, and establishes the purpose for planned improvements in order to remedy those deficiencies and achieve the vision and goals. The corridor vision encompasses a balanced, integrated approach that would implement transportation solutions for both the I-5 corridor and LOSSAN rail corridor, as well as create unique resource enhancement opportunities as part of the transportation improvements. Protection and enhancement of coastal resources and improved mobility in the NCC are necessary to achieve the regional transportation system and corridor visions, to improve the quality of life in the coastal communities, to further the region's sustainability goals, and to ensure continued use and enjoyment of coastal resources for the millions of people who visit the corridor each year.

3.1 THE NORTH COAST CORRIDOR PROBLEM

The NCC is experiencing a crisis that extends across jurisdictions, resources, infrastructure, and users. There are problems and deficiencies related to:

- Transportation and mobility;
- Access to coastal communities and resources; and
- Preservation of natural habitats and environments.

3.1.1 The Mobility Problem – Transportation Deficiencies

Larger in area than both Rhode Island and Delaware combined, and home to more people than 20 of the 50 states, San Diego County contributes significantly to the economic, political, social, recreational, and environmental well-being of California and the US. The county's location in the southwest corner of the US makes it the front door to the state and country from the land ports of entry at the border with Mexico and San Diego Bay seaports. People and goods depend on the county's rail and highway transportation network to access local, regional, state, and interstate destinations, and the transportation facilities in the NCC are key links in that regional transportation network; however, the transportation system in the NCC is breaking down because of:

- Historic population and travel growth in the corridor, region, and state from 1970 to 2009;
- Physical constraints on transportation infrastructure and capacity; and
- Continuing growth into the future.

3.1.1.1 Growth in the Corridor

Population Growth

Travel demand in the corridor has been driven by population and housing growth in the San Diego region. From 1970 to 2006, San Diego County more than doubled in population to over 3 million residents (Table 3-1). The coastal communities in the area grew at least two- to threefold. Currently, about 500,000 people reside within the corridor, which represents approximately 16% of the regional population. An additional 113,000 people are anticipated to reside in the corridor by the year 2030.

There are approximately 203,000 housing units in the corridor with an additional 30,000 housing units anticipated to be constructed within the area by 2030—a 15% increase.[1]

TABLE 3-1: POPULATION GROWTH (NORTH COAST CORRIDOR AND SAN DIEGO COUNTY)

Jurisdiction	1970	2006	2030	Change: 1970 to 2006	Change: 2006 to 2030
Oceanside	40,494	174,925	208,561	332%	19%
Carlsbad	14,944	98,607	128,772	560%	30%
Encinitas	17,210	62,815	71,025	265%	13%
Solana Beach	5,744	13,327	13,674	132%	2%
San Diego	23,315	141,435	181,642	422%	49%
Del Mar	3,956	4,524	4,720	14%	4%
Corridor Travel Shed	105,663	495,633	608,394	369%	23%
San Diego County	1,357,854	3,066,820	3,855,085	125%	26%

Source: San Diego NCC- Corridor System Management Plan (Chapter 3), July 2010.

Interregional travel demand is influenced by growth in surrounding regions. The populations of Riverside, Orange, and Imperial Counties, as well as Baja California, Mexico, increased at a greater rate than San Diego County from 1970 to 2006 (Table 3-2). The population of these neighboring regions is anticipated to increase up to 78% by the year 2030.[2] Like San Diego County, these regions depend on I-5 and the LOSSAN rail corridor to move people and goods to and through the NCC.

TABLE 3-2: POPULATION GROWTH (INTERREGIONAL)

Jurisdiction	1970 (millions)	2006 (millions)	2030 (millions)	Change: 1970 to 2006	Change: 2006 to 2030
Orange County	1.42	3.10	3.55	118%	15%
Riverside County	0.46	1.85	3.14	302%	70%
Imperial County	0.07	0.17	0.27	143%	59%
Tijuana, BC	0.34	1.43	2.54	321%	78%
San Diego County	1.36	3.07	3.86	126%	26%

Source: San Diego NCC-CSMP (Chapter 3), July 2010.

Deficiency. Transportation facilities in the NCC were developed when there were significantly fewer people living in the corridor and region, and little infrastructure expansion has occurred over the past 40 years to accommodate the increase in travel resulting from population growth.

Employment Growth

Employment within the NCC is primarily located along established transportation routes or concentrated into large activity/employment centers. Employment in the NCC has seen staggering growth since 1970—an over 1,000% increase in corridor jobs (Table 3-3). A considerable portion of the employment is located in San Diego, with much of the growth occurring within Sorrento Valley, Sorrento Mesa, the University/Golden Triangle area, and at the University of California, San Diego

[1] *San Diego NCC-CSMP* (Chapter 3), July 2010.
[2] *San Diego NCC-CSMP* (Chapter 3), July 2010.

(UCSD) campus. Employment growth in the corridor will continue to occur within these established employment centers, along with burgeoning centers in east Carlsbad and Oceanside.

TABLE 3-3: EMPLOYMENT GROWTH (NORTH COAST CORRIDOR)

Jurisdiction	1970	2004	2030	Change: 1970 to 2004	Change: 2004 to 2030
Oceanside	12,040	39,850	62,409	231%	57%
Carlsbad	1,779	54,347	79,188	2,955%	46%
Encinitas	3,151	25,012	29,736	694%	19%
Solana Beach	1,050	9,416	10,314	797%	9%
San Diego (city)	2,832	185,807	214,976	6,461%	16%
Del Mar	1,004	4,335	4,232	332%	-2%
TOTAL	21,856	318,767	400,855	1,358%	26%

Source: San Diego NCC-CSMP (Chapter 3), July 2010.

Deficiency. Transportation facilities in the NCC were developed when there were significantly fewer people working in the corridor, and little infrastructure expansion has occurred over the past 40 years to maintain efficient access to jobs.

Growth in Trip Making and Travel Demand

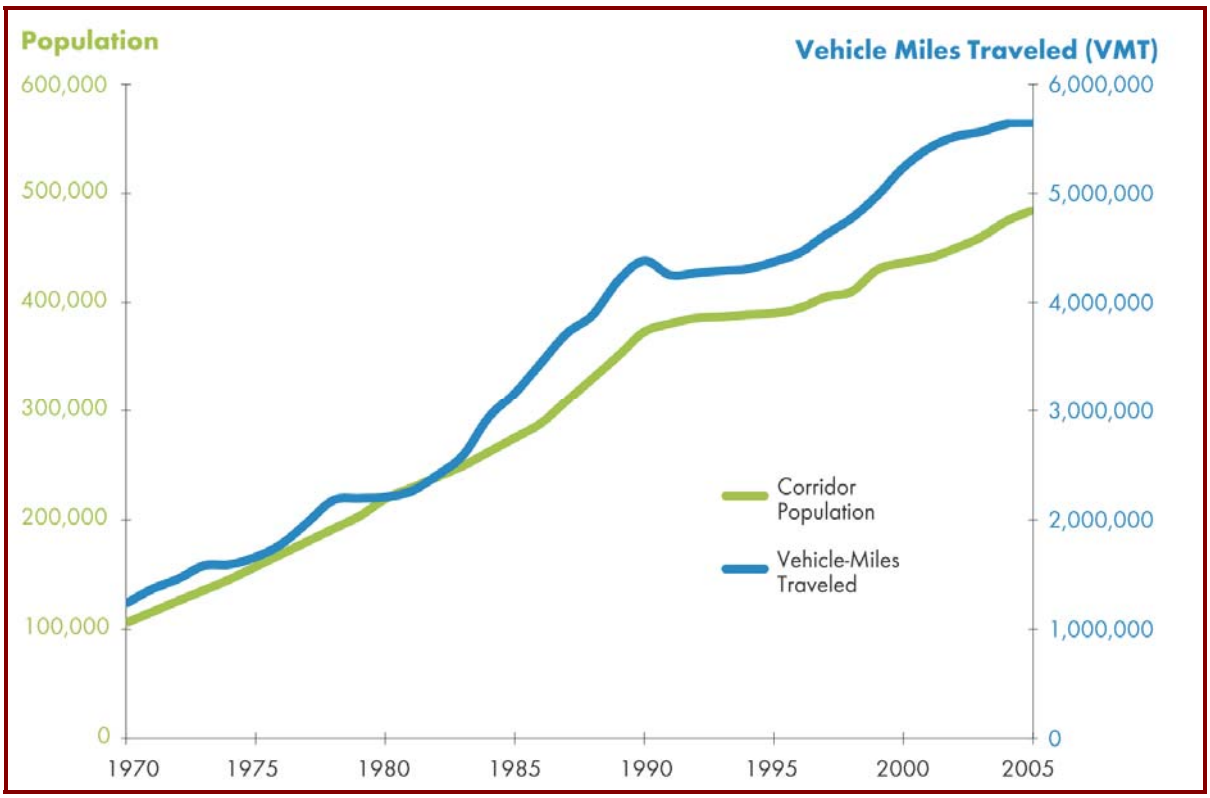
Population and employment growth tell only part of the story. While population has grown significantly in the county since 1970, vehicle miles traveled (VMT) has grown at an even faster rate. In other words, individuals are taking more and longer trips today than they were in 1970. This trend is prevalent in regions throughout the US as well in the NCC (Figure 3-1**)**.

In addition to growth in VMT, the actual number of trips in the corridor has grown significantly in the past 40 years and will continue to grow in the future. By the year 2030, travel demand in San Diego County is projected to increase to over 13.7 million daily trips, an increase of 25%. Over the same period, travel demand within the corridor is expected to increase to over 3.2 million daily trips, and approximately 1 million of these trips are anticipated to include travel on at least a segment of I-5. Travel demand on I-5 from I-805 to Carmel Valley Road increased 486% from 1970 to 2006 (a much higher growth rate than the 369% increase in corridor population over the same period) with an average daily traffic volume of 281,400 trips (Table 3-4). By 2030, this figure is expected to increase to about 413,000 daily vehicle trips.[3] As shown in Table 3-4, similar trends occur along other I-5 segments in the NCC.

Deficiency. Travel demand on I-5 in the NCC has grown considerably since the current eight-lane facility opened in the late 1960s. Highway capacity and infrastructure has not kept pace with the significant growth in population, employment, and travel demand (including increases in both trip making and VMT) over the last 50 years.

[3] *I-5 NCC Project Draft EIR/EIS* (Section 1-3), June 2010.

FIGURE 3-1: NORTH COAST CORRIDOR POPULATION AND TRAVEL (1970–2005)



Source: San Diego NCC-CSMP (Chapter 4), July 2010.

TABLE 3-4: ANNUAL AVERAGE DAILY TRIPS (I-5 NORTH COAST CORRIDOR)

I-5 Segment	1970	2006	2030 (No Build)	% Change (1970–2006)	% Change (2006–2030)
I-805 to Carmel Valley Road	48,000	281,400	412,640	486%	47%
Encinitas Blvd. to Leucadia Blvd.	43,000	191,500	294,300	343%	54%
Mission Ave. to SR-76	49,000	156,8,000	246,500	220%	57%

Source: I-5 NCC Project Draft EIR/EIS (Section 1-3), June 2010.

3.1.1.2 Highway Travel Impediments and Access Constraints

Weekday and Peak Period Highway Travel

The existing freeway facility is at capacity during the peak periods, resulting in congestion and travel delays. The only way to accommodate the projected 47–57% increase in trips on I-5 by 2030 (see Table 3-4) would be to extend the congested peak periods over a longer period of time. On most highways, peak-period congestion applies to a single direction of travel, such as a morning peak period heading into downtown and an afternoon peak period heading out of downtown. Southbound I-5, however, experiences two peak periods during the day. Current congestion occurs for an average of five hours a day in both the southbound and northbound directions. As shown in Table 3-5, during the off-peak (defined as non-commute times generally before 6:00 A.M., from 9:00 A.M.–3:00 P.M., and after 6:00 P.M.), it currently takes an average of 23–25 minutes to drive the 27 miles in either direction on I-5 between Harbor Drive at the north end of the corridor and La Jolla Village Drive at the south end. During the peak periods, as shown in Figure 3-2, average southbound travel time increases up to 32 minutes in the afternoon and up to 44 minutes in the morning. Northbound average travel time increases to up to 39 minutes during the afternoon peak period. The peak-period congestion and travel-time degradation is compounded by the multi-purpose trip nature of this highway that serves not only high volumes of commute trips, but also recreational, regional, interregional, and short-distance local trips.

TABLE 3-5: 2006 TRAVEL TIME IN MINUTES – HARBOR DRIVE TO LA JOLLA VILLAGE DRIVE (I-5 NORTH COAST CORRIDOR)

	Off-Peak Hours	AM Peak Hours	PM Peak Hours
Southbound	23–25 minutes	31–44 minutes	27–32 minutes
Northbound	24 minutes	24–25 minutes	35–39 minutes

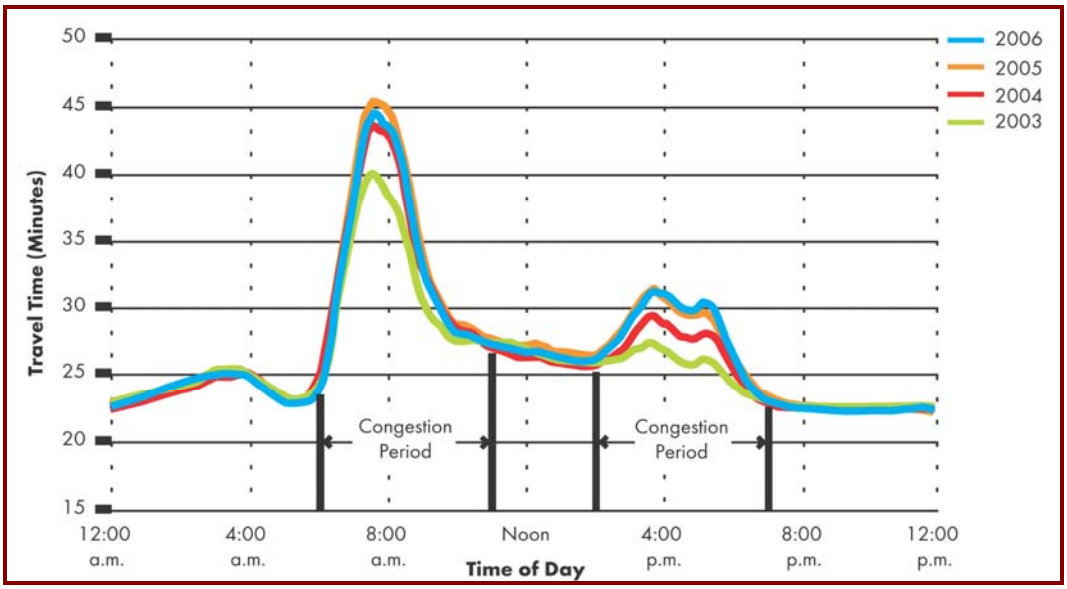
Source: I-5 NCC Project Draft EIR/EIS (Section 1-3), June 2010.

Although the average southbound peak period travel time is as high as 44 minutes, peak-period travel times vary, resulting in unpredictable and unreliable travel. As shown in Figure 3-3, southbound I-5 travelers must plan for travel times of close to 90 minutes to account for the unpredictability of the trip. These buffered travel times have both personal and economic impacts to individuals and businesses.

Figure 3-4 illustrates the geographic extent of existing congestion and travel delay along the I-5 NCC during the peak periods in both the southbound and northbound directions. The southern end of the corridor currently experiences the most congestion.

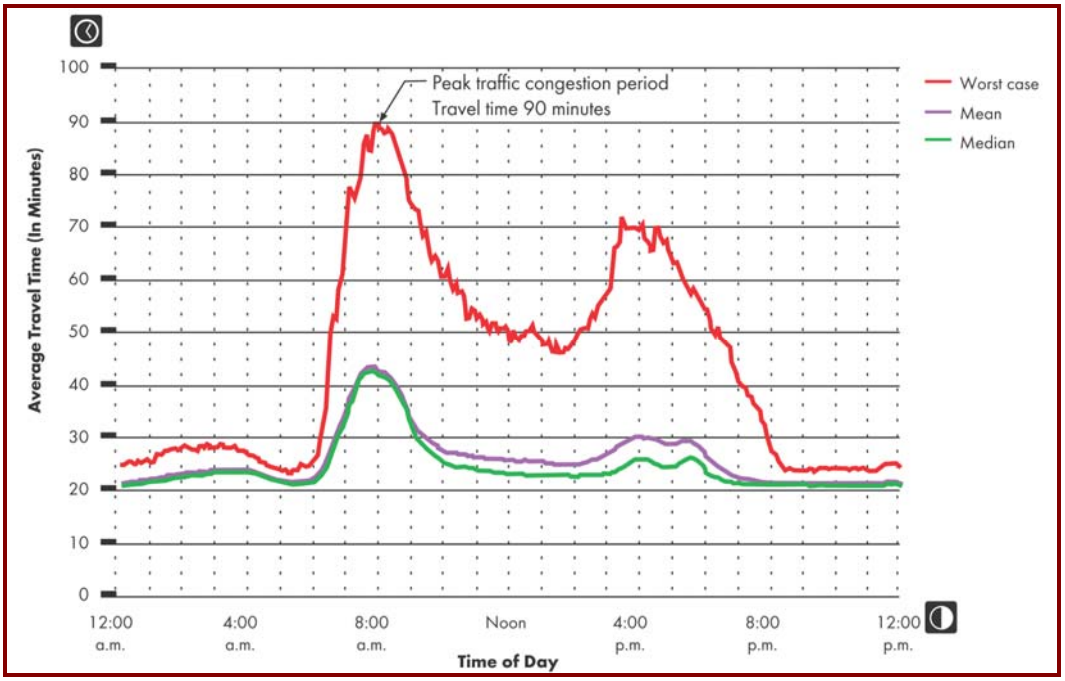
Deficiency. Weekday peak period highway travel demand in the NCC exceeds current capacity, resulting in a breakdown of the transportation system, impediments to travel (such as long and unpredictable travel times), and constraints on access to coastal areas and resources. In the NCC, highway travel demand is projected to increase with or without planned highway improvements (and with planned improvements to the rail corridor). Failure to accommodate the projected increase in travel demand will result in an ongoing degradation of mobility and access in the corridor, particularly for peak-period commute trips.

FIGURE 3-2: AVERAGE WEEKDAY TRAVEL TIME – I-5 SOUTHBOUND (HARBOR DRIVE TO LA JOLLA VILLAGE DRIVE [27 MILES])



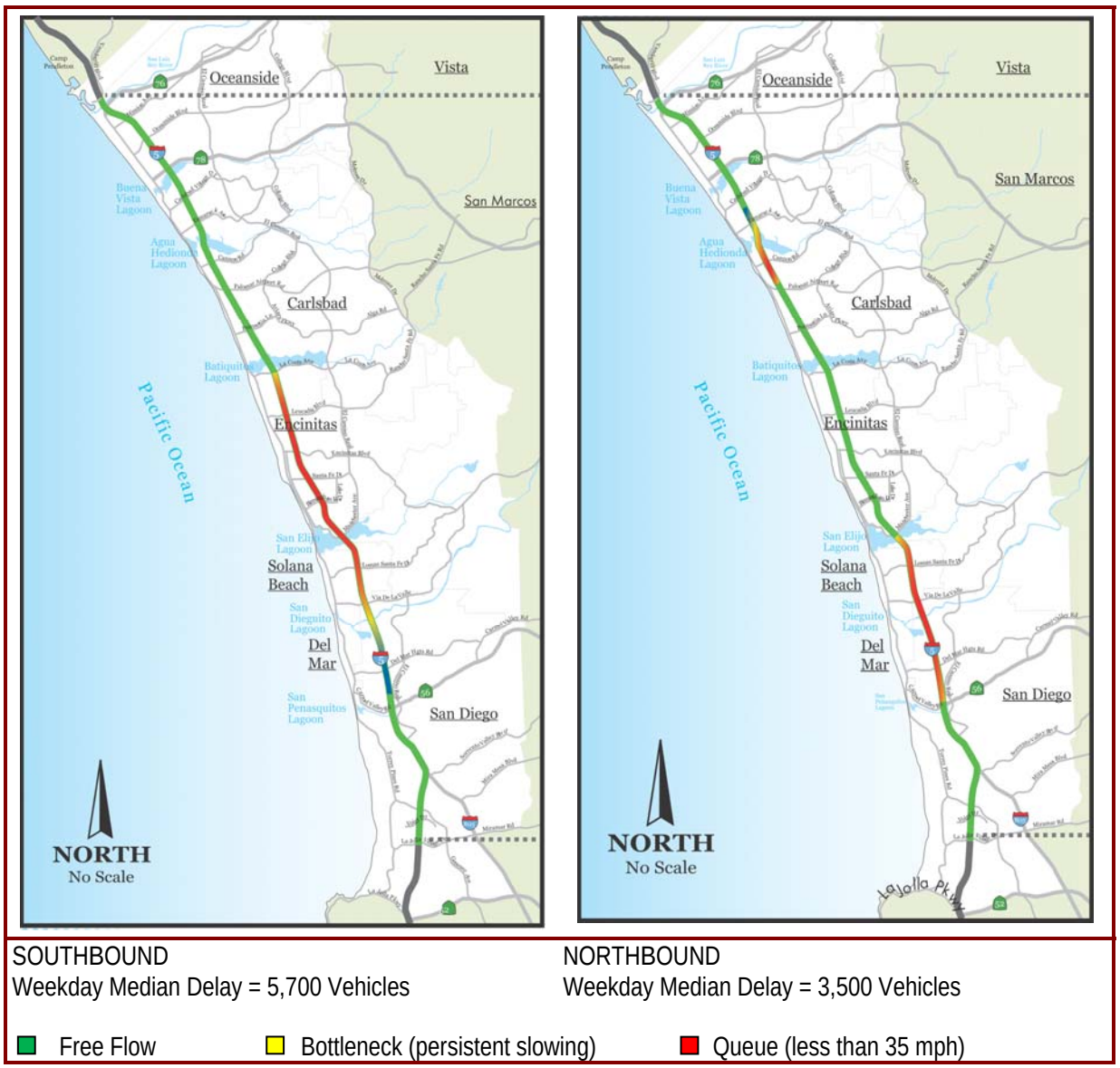
Source: San Diego NCC-CSMP (Chapter 5), July 2010.

FIGURE 3-3: TRAVEL TIME VARIABILITY – I-5 SOUTHBOUND (HARBOR DRIVE TO LA JOLLA VILLAGE DRIVE)



Source: San Diego NCC-CSMP (Chapter 5), July 2010.

FIGURE 3-4: WEEKDAY (2008) PEAK-PERIOD CONGESTION (I-5 NORTH COAST CORRIDOR)



Source: San Diego NCC-CSMP (Chapter 5), July 2010.

Weekend Highway Travel

As population has grown in the region, more people have sought access to corridor coastal resources, placing an increased demand on the region's transportation network. Projected population, employment, and travel demand growth will further intensify the pressure on the I-5 system for access to the coast. The beaches within the NCC accommodate nearly half the region's beach visits and, as shown in Table 3-6, currently attract over 2 million people a year from throughout San Diego County and neighboring regions.

Most of the 2 million coastal recreational and visitor trips in the NCC occur on weekends. The primary access to beach and other coastal recreational resources in the corridor for both locals and visitors is

via I-5. Corridor topography and the resulting street network limit access alternatives. Because of beach and coastal area access demand, weekend traffic on I-5 approaches or exceeds weekday congestion. In particular, the corridor experiences consistent southbound weekend congestion, resulting in a corridor travel time of up to 30 minutes, 5–7 minutes longer than free-flow travel times.[4]

TABLE 3-6: BEACH USAGE (NORTH COAST CORRIDOR)

Location	Annual Beach Usage
Carlsbad	639,810
Oceanside	415,319
La Jolla	395,402
Del Mar	180,063
La Jolla Shores	176,348
Encinitas	116,053
Torrey Pines	78,347
Total for NCC Beaches	2,001,342
Other County Beaches	2,271,825

Source: San Diego Convention and Visitors Bureau, 2006 Visitors Profile Study.

Figure 3-5 shows the geographic extent of existing congestion and travel delay along the I-5 NCC during summer weekends in the northbound direction. Summer weekends experience severe congestion along almost the entire length of northbound I-5 in the NCC for much of the day.

High Occupancy Vehicles (HOVs or carpools) comprise approximately 60% of weekend trips compared to approximately 13% of trips during weekday peak periods. Because, by definition, HOVs (carpools) transport more people per vehicle than Single Occupancy Vehicles (SOVs), HOVs provide a more efficient use of highway facilities. As a result, HOV lanes enhance freeway capacity by carrying a greater number of people than freeway general-purpose lanes. Even with the large percentage of HOVs using the I-5 NCC on summer weekends, traffic congestion persists, indicating that the freeway is carrying much larger volumes of people (versus autos) on weekends than weekdays. HOVs as a percentage of vehicles on the road are anticipated to increase approximately 2%–7% by 2030.[5]

Deficiency. Like weekday peak periods, weekend highway travel demand in the NCC exceeds current capacity, resulting in a breakdown of the transportation system, impediments to travel (such as long and unpredictable travel times), and constraints on access to coastal areas and resources. Highway travel demand is projected to increase in the NCC with or without planned highway improvements (and with planned improvements to the rail corridor). Failure to accommodate the projected increase in travel demand will result in an ongoing degradation of mobility and access in the corridor on weekends, particularly for recreational trips.

[4] *I-5 NCC Project Draft EIR/EIS* (Section 1-3), June 2010.
[5] *I-5 NCC Project Draft EIR/EIS* (Section 1-3), June 2010.

FIGURE 3-5: SUMMER (2007) WEEKEND NORTHBOUND CONGESTION (I-5 NORTH COAST CORRIDOR)

Free Flow | Bottleneck (persistent slowing) | Queue (less than 35 mph)

Source: San Diego NCC-CSMP (Chapter 5), July 2010.

Limited Alternatives for Auto Trips

Automobile trips make up over 95% of all trips in the NCC and I-5 carries the vast majority of those trips for at least a segment.[6] The lack of alternatives to I-5 for automobile travel in the corridor contributes significantly to the demand placed on the highway. Development of the local street network in the corridor has been restricted by topographical constraints that include hills, valleys, and the six lagoons. As a result, the corridor arterial street network, shown in Figure 3-6 and Figure 3-8**,** is sparse and circuitous, and limited, parallel arterial roadways in the corridor force many local trips onto the freeway. This constraint is evident when the arterial street network in the Mid-City neighborhood of San Diego is compared to that of the NCC (Figure 3-6). The street network in Mid-City provides far more local trip options and far greater access to and from the freeway than is available in the NCC. The default use of I-5 for short-distance local trip making compounds the demand on facilities that are intended primarily to serve regional and interregional travel. Alternatively, regional and interregional trips may spill over onto local streets in an attempt to avoid congestion. This leads to large volumes of through traffic using coastal access routes and local streets, which negatively affects the character of these coastal communities and negatively impacts access to coastal recreational resources for visitors and residents. Such communities include downtown Carlsbad and Encinitas as shown in Figure 3-7.

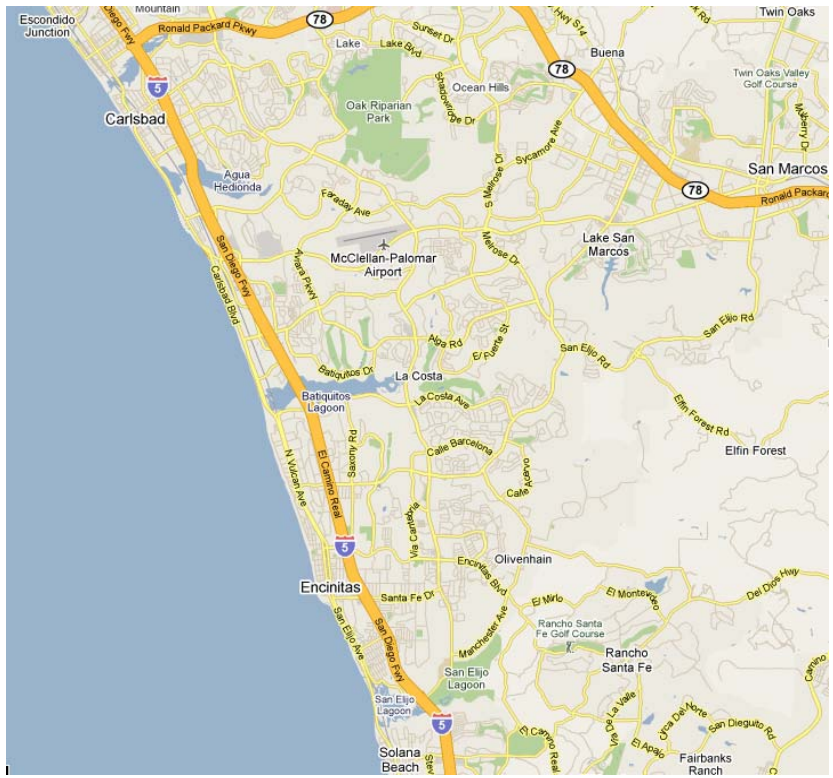
Deficiency. There are few alternatives to I-5 for local travel in the corridor due to the lack of parallel roadways and the sparse and circuitous arterial street network.

Persistent Highway Demand

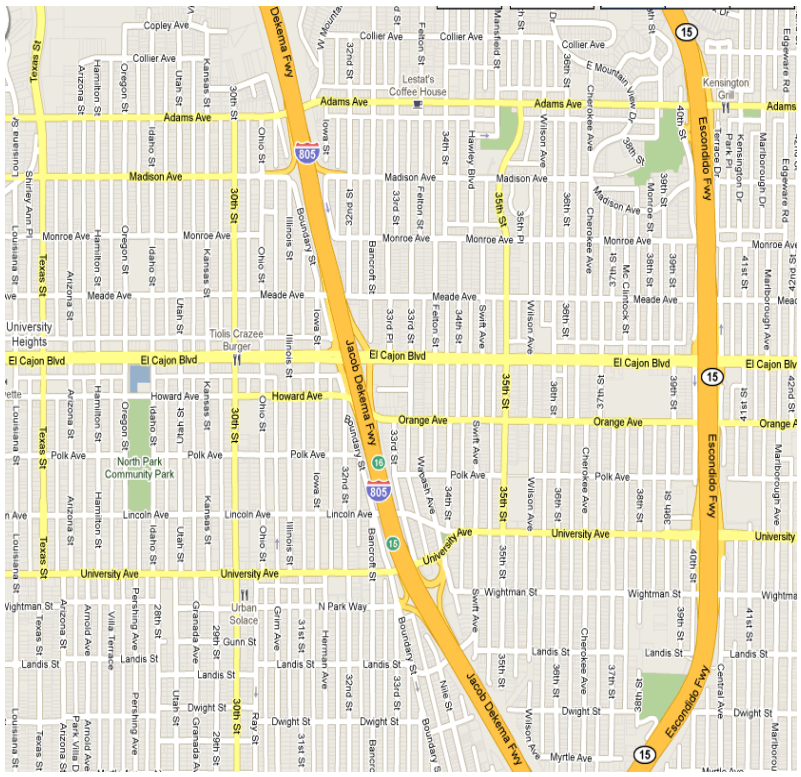
SANDAG's travel forecasting models project significant growth in I-5 travel demand in the NCC and indicate that this growth will occur regardless of whether highway capacity improvements are made between today and 2030. In other words, planned improvements to I-5 would not significantly induce travel—they would make already occurring travel more efficient and reliable. The forecasts, which assume planned improvements to the parallel rail corridor, indicate that vehicle miles traveled (VMT) on the I-5 NCC will increase by 30% by 2030 under a No Build (no highway capacity increases) Alternative (Table 3-7). The No Build Alternative will result in more congested highways, increased travel time, unpredictable and unreliable trips, and increased emissions, impeding travel through the corridor and degrading access to coastal communities and resources. With the planned addition of four HOV/Managed Lanes to I-5 (for carpools, vanpools, transit, and tolled SOVs), the travel forecasts project an incremental 8% increase in VMT beyond the future No Build Alternative. This indicates that the projected increase in VMT over the next 20 years is more a function of demand than increasing capacity. The proposed improvements would address the operating effectiveness and efficiency of the highway and enhance mobility and access in the corridor.

[6] SANDAG Urban Core Transit Strategy, 2008 Transit Trip Share by District Model Results.

FIGURE 3-6: COMPARATIVE STREET NETWORKS (NORTH COAST CORRIDOR AND SAN DIEGO)



North Coast Corridor



San Diego's Mid-City Neighborhood

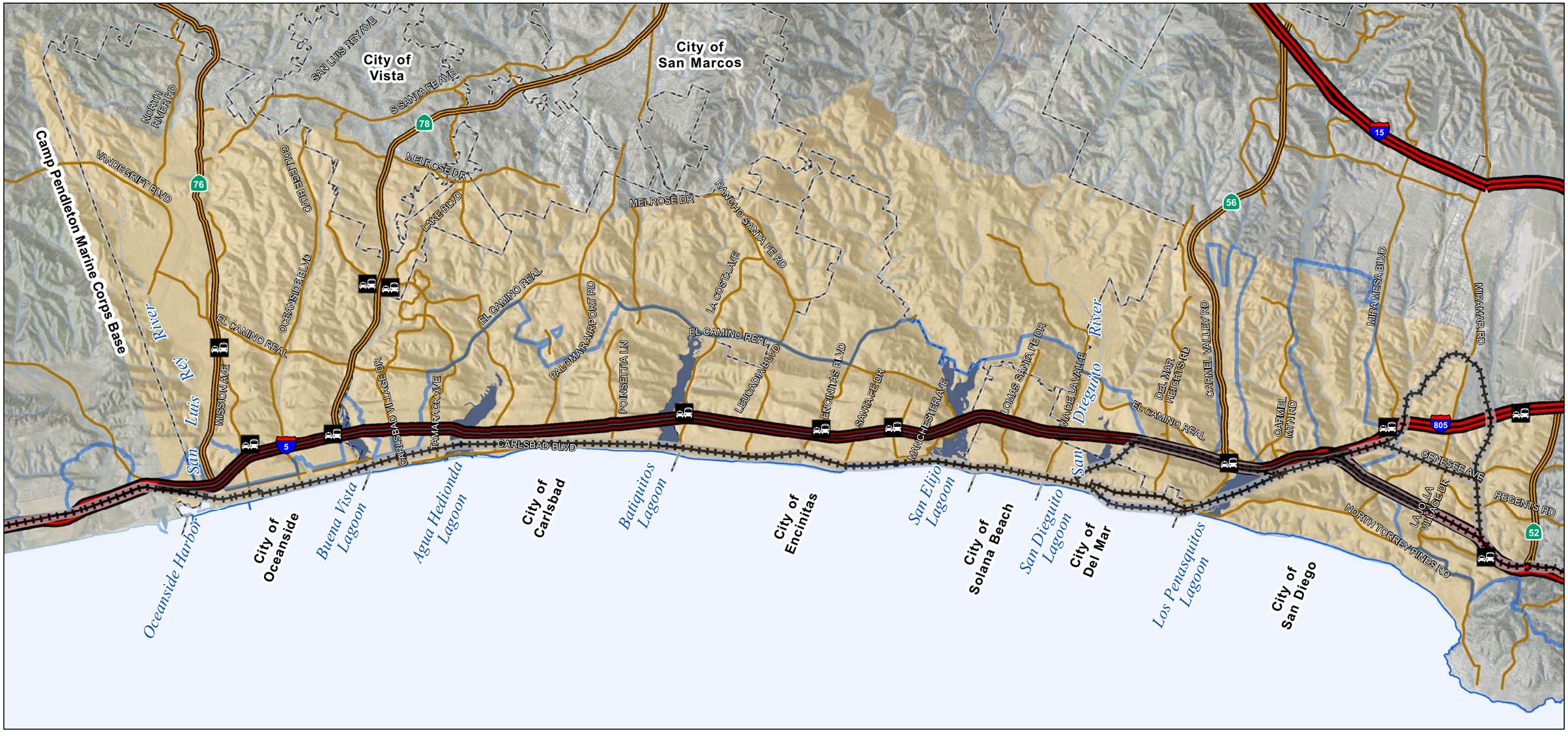
Source: Google Maps. 2010. http://maps.google.com/

FIGURE 3-7: COASTAL COMMUNITIES POSSIBLY AFFECTED BY SPILLOVER TRAFFIC

Grand Avenue and State Street, Carlsbad

D Street and Coast Highway, Encinitas

Source: SANDAG Smart Growth Photo Library, 2008.



NORTH

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

0 1 2 4 Miles

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

FIGURE 3-8

Highway and Major Arterial Facilities (Existing)

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

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TABLE 3-7: VEHICLE MILES TRAVELED (I-5 NORTH COAST CORRIDOR)

	Existing (2008)	No Build (2030)	No Build% Change from Existing	I-5 Project (2030)*	I-5 Project% Change from No Build
Daily VMT	5.44 million	7.05 million	29.6%	7.63 million	8.2%

Source: San Diego NCC-CSMP (Chapter 5), July 2010.

* 10+4 Buffer Alternative, consisting of 10 General Purpose lanes plus 4 HOV lanes.

Figure 3-9 displays the projected geographic length of congestion and travel delay in the corridor in 2030 without any operational improvements or enhancements to the existing transportation capacity. Congestion would expand significantly as compared to the current conditions shown in Figure 3-4, to the extent that the entire length of the corridor in both directions is projected to experience severe congestion and traffic delay during the peak periods by 2030. In addition, if no improvements are made to I-5, forecasts indicate that the projected increases in average daily traffic (ADT) would extend the time duration of congestion in both the northbound and southbound directions. Currently, congestion lasts for 5 hours in both the northbound and southbound directions. By 2030, if no improvements are made to I-5, congested travel hours will more than double with northbound congestion forecast to extend to 9-10 hours and southbound congestion extending to 13 hours.[7]

Congestion on I-5 is expected to result in travelers using El Camino Real and Pacific Highway as alternative North-South routes. Without improvements to I-5, this is expected to result in an average weekday increase in peak period traffic of 10%–15% on El Camino Real and 15%–20% on Pacific Highway. It is likely that spillover impacts to seasonal and weekend travel will be higher.

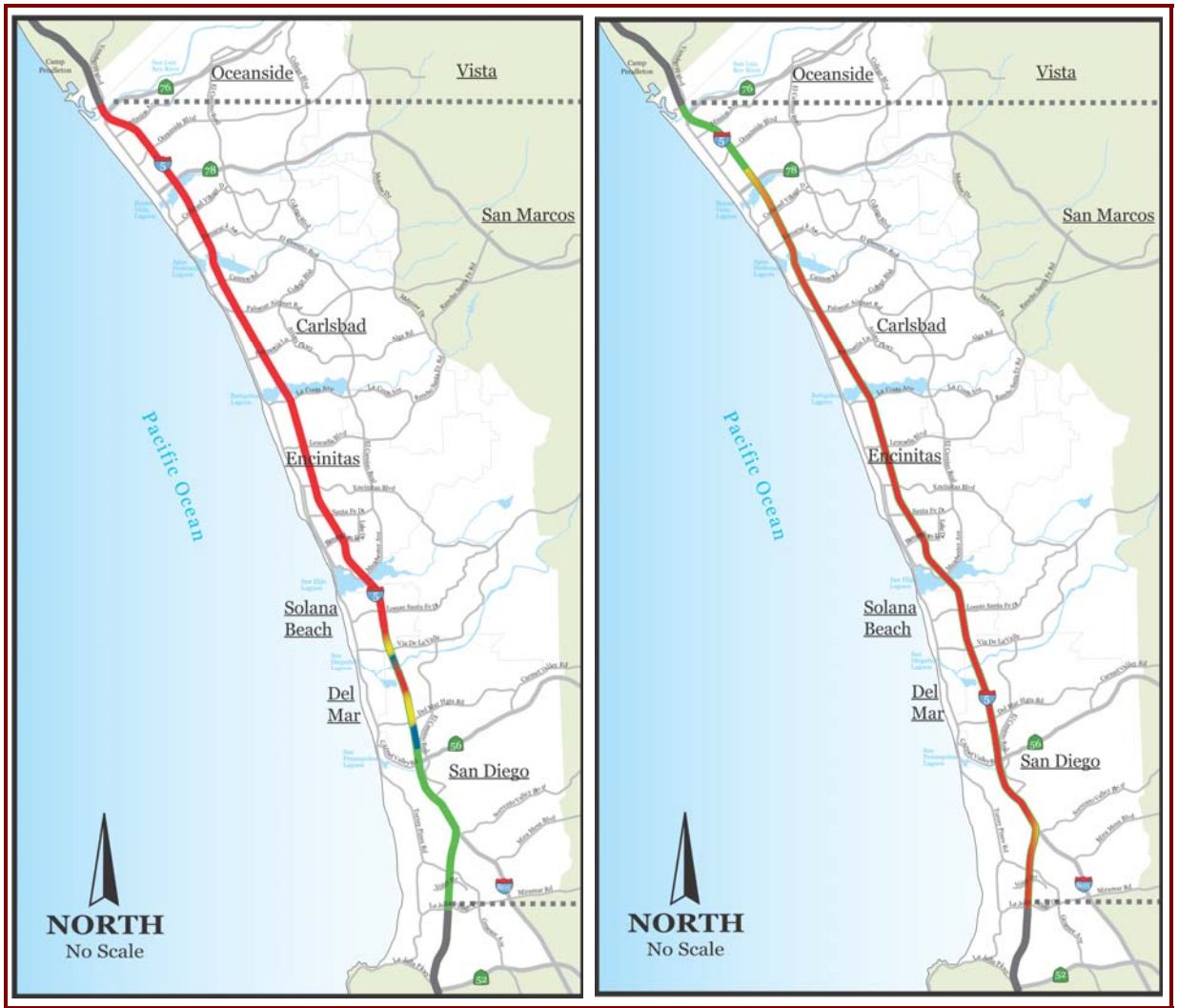
Congestion, particularly stop and go congestion, also both decreases vehicle energy efficiency and increases vehicle hours traveled, leading to increased energy consumption. Fuel consumption increases by about 30% when average speeds drop from 30 mph to 20 mph, while a drop from 30 mph to 10 mph results in a 100% increase in fuel use. Studies estimate that approximately 10% of all on-road fuel consumed is a result of congestion.[8]

Deficiency. I-5 and parallel local streets in the NCC would continue to degrade in the absence of improvements.

[7] *San Diego NCC-CSMP* (Chapter 5), July 2010.

[8] *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007. *California Energy Commission Energy Efficiency Report*, 1990.

FIGURE 3-9: WEEKDAY PEAK PERIOD CONGESTION – 2030 PROJECTED NO BUILD ALTERNATIVE (I-5 NORTH COAST CORRIDOR)



SOUTHBOUND
Weekday Median Delay = 80,000+ Vehicles

NORTHBOUND
Weekday Median Delay = 35,000 Vehicles

Free Flow | Bottleneck (persistent slowing) | Queue (less than 35 mph)

Source: San Diego NCC-CSMP (Chapter 5), July 2010.

3.1.1.3 Corridor Travel Alternatives

LOSSAN Rail Corridor

The NCC is a multi-modal corridor that includes alternatives to automobile travel. In particular, the San Diego segment of the LOSSAN rail corridor provides COASTER commuter rail and Amtrak intercity passenger rail services in San Diego County and connects with Metrolink commuter rail service and SPRINTER light rail at the Oceanside Transit Center (Figure 3-10). While the vast majority of trips in the NCC will continue to be by auto through 2030 and beyond, addressing deficiencies and constraints on the existing rail corridor enhances the rail alternative and improves access and mobility along San Diego's North Coast.

Growth in corridor travel is reflected in plans for increased rail service. The COASTER trains currently travel between Oceanside and downtown San Diego 22 to 26 times each weekday. By 2030, COASTER commuter rail operations are expected to increase to 54 trains each weekday and provide increased weekend service. Six additional Surfliner daily round trips (for twelve total one-way trips) are planned by 2030 to accommodate the projected increase in travel demand. Currently, Metrolink operates 16 trains each weekday to Oceanside. By 2030, Metrolink service to Oceanside is expected to increase to 20 weekday trains. New weekend service is also planned.

Rail Corridor Operational Constraints. With four rail operators sharing the LOSSAN corridor, passenger rail services along corridor, including the NCC segments, are constrained by infrastructure that is significantly undersized for the volumes of traffic it accommodates. As shown in Figure 3-11, 51% of the existing rail corridor between San Clemente and downtown San Diego consists of single track. These single-track sections greatly constrain the movement of trains through the corridor as trains must stop and wait at scheduled meets to allow for passing. Not only do these scheduled meets increase trip time for travelers, if one train experiences an unscheduled delay, it ripples throughout the corridor, affecting the schedules and on-time performance of other trains on the tracks. The result is relatively poor and unpredictable on-time performance on the LOSSAN rail corridor, particularly for Amtrak services (Figure 3-12). Poor and unpredictable on-time performance deters people from choosing rail for trips in which rail could otherwise be an option.

> **Deficiency.** Single track on over half of the LOSSAN corridor creates train delays, longer travel times and adversely impacts on-time performance.

Rail Corridor Capacity Constraints. The single-track sections also limit the number of trains that can use the tracks at any given time, capping passenger capacity in the corridor. COASTER service operates every 30 to 45 minutes in the peak-period peak direction while Amtrak operates approximately hourly in the peak-period peak direction. With the addition of Metrolink and periodic BNSF freight service, the number of train trips in the corridor is near capacity under current track conditions. The inability to increase service frequency on passenger rail reduces the attractiveness of rail as a viable transportation alternative in the NCC for many trips that require greater flexibility in travel-time choices. It also constrains the economic growth of freight rail service.

> **Deficiency.** The numerous sections of single track limit the number of trains that can operate in the corridor at any one time, limiting passenger capacity and the ability of rail service to meet growing passenger demand.

Rail Corridor Access Constraints. Access to LOSSAN passenger rail stations in the NCC is primarily by private automobile; between 55% and 75% of passengers boarding the COASTER at stations within the NCC drove alone and parked at one of the stations. Combined with those who carpooled or were dropped off at the stations, over 80% of all NCC COASTER passengers arrived at the station by car.[9] The remaining passengers walked, biked, or took local transit buses to the stations. Although driving and parking is, by far, the primary access to the LOSSAN rail corridor, parking availability has been historically constrained at stations. While parking has expanded in recent years at the Oceanside and Carlsbad Village stations, insufficient parking continues to inhibit many potential passengers from using rail corridor services. On average, all of the station parking lots, except Oceanside, are at, or exceed, capacity by 8:00 A.M. Table 3-6 shows the parking and feeder-bus access currently available at each station along the rail corridor in San Diego County.

Deficiency. Most access to rail stations in the corridor is by car and parking demand exceeds supply at most stations.

Bicycle and Pedestrian Alternatives

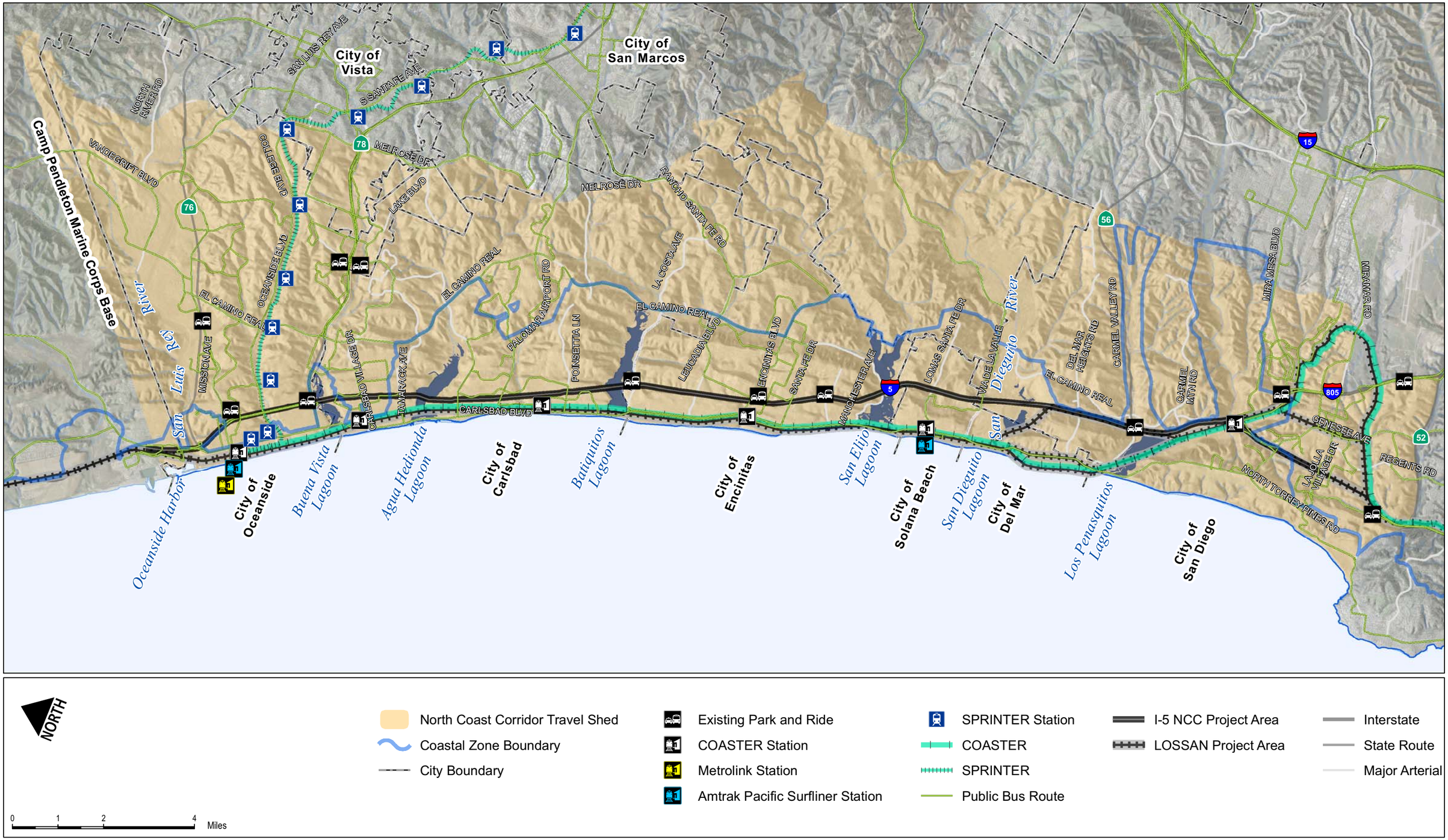
The Coastal Rail Trail provides coastal access the length of the NCC primarily on a bicycle facility. The trail has been developed to different levels with some segments providing bike lanes on streets while other segments provide completely separate rights-of way. Access to the trail occurs along primary and secondary bicycle routes, which run inland from the coast. These inland east-west routes are limited and contain gaps due to topographical, transportation facility, and environmental barriers. Additionally, many routes cross overpasses and rail crossings where facilities narrow and the quality degrades. Pedestrian access on the Coastal Rail Trail is limited to separated right-of-way (ROW) segments. Currently, there are 35 non-standard east-west bicycle crossings and 22 non-standard east-west pedestrian crossings in the corridor. As a result, it is difficult to make local trips using these bicycle pedestrian routes. Figure 3-14 shows the bicycle and pedestrian facilities in the NCC.

Deficiency. There are substandard segments, barriers, and gaps in the bicycle and pedestrian routes and trails in the corridor, resulting in an incomplete network.

Corridor Transportation Mode Share

While the NCC contains highway, local streets, rail, and bike/pedestrians routes and trails, the vast majority of trips in the corridor are made by automobile. Travel in the corridor and region is dispersed with multiple origins, destinations, and times of travel. Driving provides travelers with flexibility, convenience, and time savings that is difficult for transit, walking, and biking to achieve. Mode share data provide information on the percentage of total trips that occur on each mode of transportation (i.e., SOV, carpool, public transit, and other). Table 3-7 shows the existing work-trip mode share for trips in the NCC, California, and the United States. Figure 3-13 shows the quantity and share of morning trips crossing Los Peñasquitos Lagoon by transportation facility.

[9] SANDAG 2002 Onboard COASTER Station Access Survey, Figure 11.



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

FIGURE 3-10

Rail and Transit Facilities (Existing)

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

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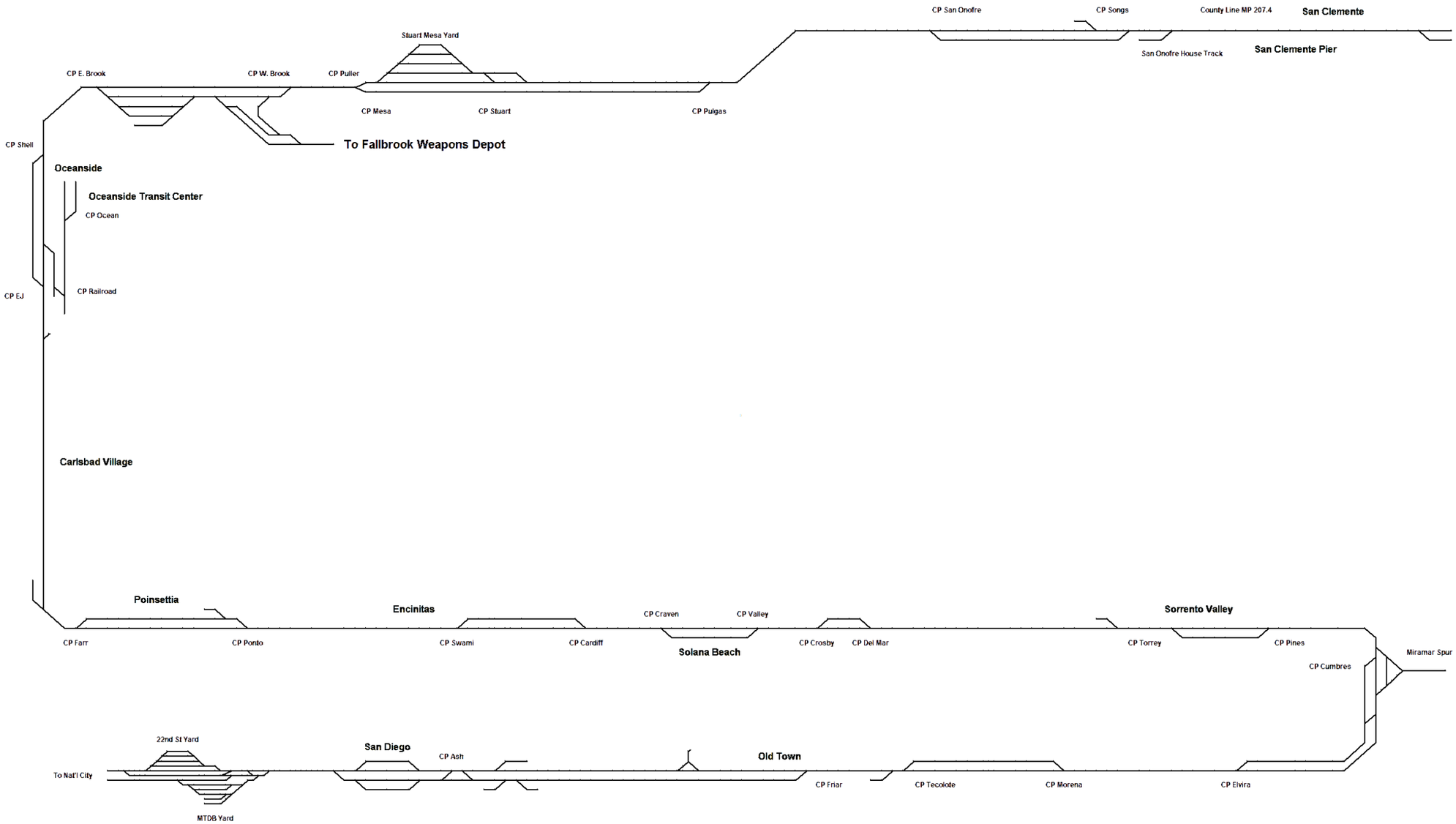
FIGURE 3-11: LOSSAN TRACK CONFIGURATION (SAN DIEGO COUNTY)



Schematic diagram of LOSSAN corridor in San Diego County illustrates locations of single- and double-track segments, stub tracks, yards and sidings. A single line represents a segment of single track. Two parallel lines represent a segment of double track.

Source: San Diego – LOSSAN Corridor Project Prioritization Analysis, Final Project Report, July 2009.

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TABLE 3-6: STATION PARKING AND FEEDER-BUS SERVICE – SAN DIEGO COUNTY (LOSSAN RAIL CORRIDOR)

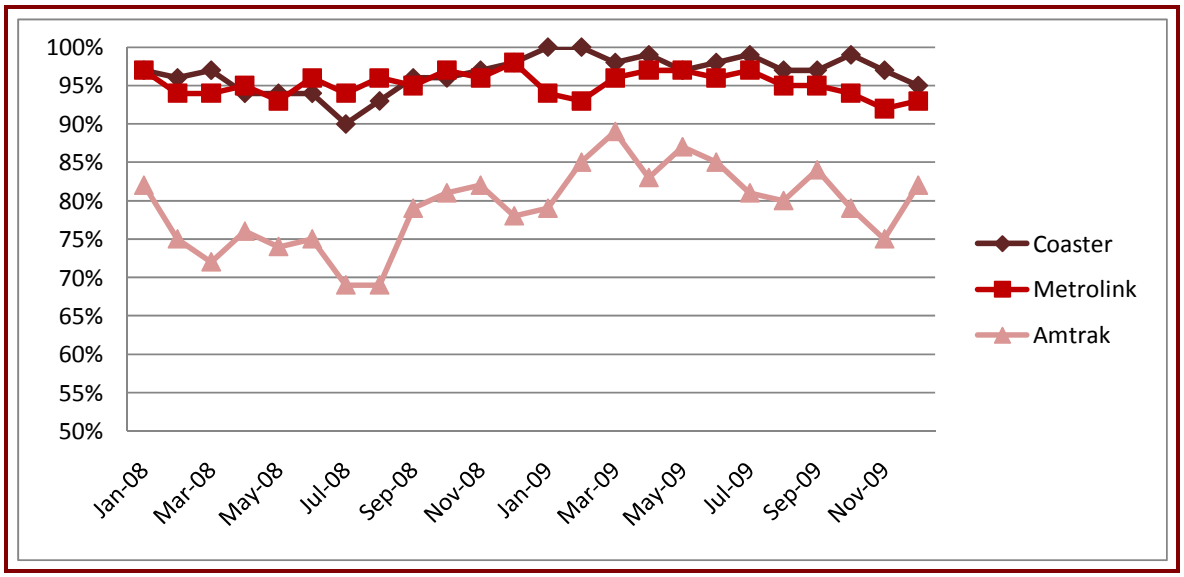
Station	Station Rail and Intercity Services	Number of Parking Spaces	Feeder-Bus Access
Oceanside Transit Center	COASTER, Amtrak, SPRINTER, Metrolink, Greyhound	1,200	Routes 101, 302, 303, 310, 311, 312, 313, 315, 316, 318, 320, 395, 397, 415 and RTA Route 202
Carlsbad Village	COASTER	480	Routes 101, 321, 322, 324, 344 and COASTER Connection Shuttle
Carlsbad Poinsettia	COASTER	350	Routes 321, 444, 445
Encinitas	COASTER	290	Routes 101, 304, 309, 310, 321, 365, 404, FAST, COASTER Connection Shuttle
Solana Beach	COASTER, Amtrak	290	Routes 101, 308
Sorrento Valley	COASTER	120	Route 89 and COASTER Connection Shuttles
Old Town	COASTER, San Diego Trolley Blue Line, San Diego Trolley Green Line, 10 local bus routes	450	Routes 8, 9, 19, 14, 28, 30, 35, 44, 105, 150
Downtown San Diego	COASTER, Amtrak	0	Downtown bus routes

TABLE 3-7: COMMUTE TRIP MODE SHARE

Area	Drive Alone	Carpool/Vanpool	Public Transit	Other Modes	Worked at Home
North Coast Corridor	76%	10%	3%	2%	7%
California	72%	15%	5%	5%	4%
United States	76%	12%	5%	4%	3%

Source: San Diego NCC-CSMP (Chapter 4), July 2010.

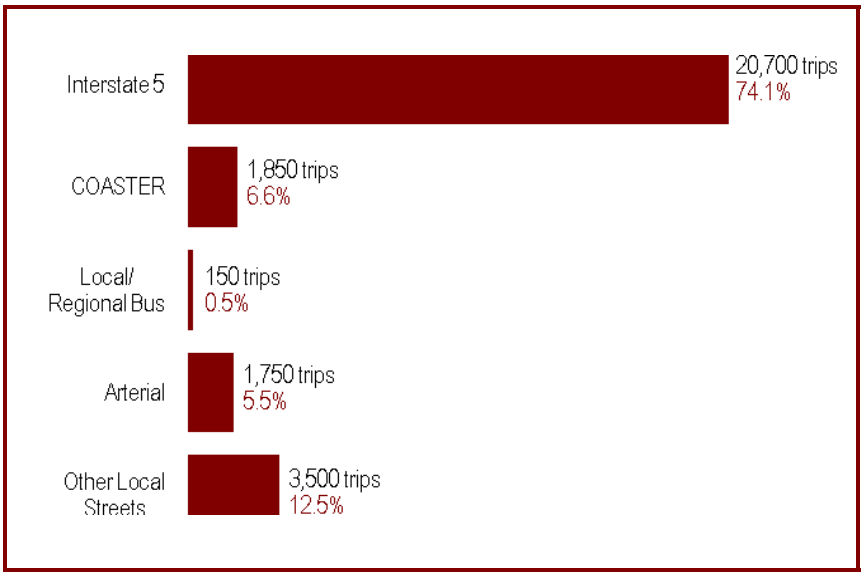
FIGURE 3-12: ON-TIME PERFORMANCE (LOSSAN RAIL CORRIDOR)



Source: San Diego NCC-CSMP (Chapter 5), July 2010.

FIGURE 3-13: PEAK MODE SHARE (A.M.)

(based on person trips across Los Peñasquitos Lagoon)



Source: San Diego NCC-CSMP (Chapter 4), July 2010.

NORTH

0 1 2 4 Miles

North Coast Corridor Travel Shed
Coastal Zone Boundary
City Boundary

I-5 NCC Project Area
LOSSAN Project Area
Interstate
State Route
Major Arterial

Bicycle and Pedestrian Routes

Primary Existing Bicycle Facility
Secondary Existing Bicycle Facility

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

FIGURE 3-14

Primary Bicycle and Pedestrian Routes

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Table 3-6 indicates that 7.1% of all trips across Los Peñasquitos Lagoon are made on transit (COASTER rail and local bus). Table 3-7 reveals that carpool/vanpool, transit and other (bike and walk) mode shares in the NCC are less than in California and the nation. This data indicates that there are opportunities to increase the non-drive-alone mode shares in the NCC. Any shift away from SOV trip making would enhance the capacity of the transportation system by shifting the focus from carrying more cars to carrying more people. Getting more people into carpools, onto transit, and using bicycles and their feet to travel would minimize the infrastructure expansion required to accommodate the overall travel demand in the corridor. SANDAG and Caltrans are striving for these goals. The SANDAG Regional Transportation Plan (RTP) includes a program of projects that expand carpool and transit facilities and services in the NCC, in addition to innovative improvements for SOV travel, which will remain the predominant travel mode in the corridor.

Deficiency. Drive-alone travel encompasses the vast majority of trips in the corridor. By improving the competitiveness of alternative modes, the corridor transportation-system capacity will be increased.

Mobility Problem Summary and Conclusions

Travel demand in the NCC has, and will continue to strain the existing transportation infrastructure and services. Both the I-5 freeway and LOSSAN rail corridor are plagued by deficiencies that inhibit travel and access in the corridor. In addition, options for non-motorized travel in the corridor contain barriers and gaps making it difficult to complete local trips by foot or bike. In summary:

- I-5 was originally built as an eight-lane freeway in the 1960s and 1970s and has not had any major improvements since then to keep pace with the significant population, employment, and travel-demand growth in the corridor over the last 50 years.
- Highway demand exceeds capacity, resulting in traffic congestion, delay, and long travel times in the corridor, particularly for commute trips during the peak periods and recreational trips during the weekends.
- Highway congestion and delay result in unreliable and unpredictable trips for travelers.
- Due to topographic constraints, there are few arterial street alternatives to I-5 for local trips, which forces more trips onto the freeway.
- Existing transportation facilities focus primarily on moving cars, not people, through the corridor.
- Passenger rail capacity and performance is constrained by infrastructure deficiencies, specifically the high percentage of single-track sections within the corridor.
- Parking demand at rail stations exceeds capacity, limiting access to the rail corridor.
- The bicycle and pedestrian transportation network contains barriers, gaps, and substandard facilities, which discourages local bike and walk trips and inhibits access to coastal areas.
- Population, employment, and coastal recreational use are projected to continue to grow, placing even larger demands on the highway, rail, and trail systems in the corridor. Spillover traffic will negatively affect local arterials and coastal access routes.

To maintain and enhance mobility in the corridor and provide access to coastal communities and resources, improvements are needed to the corridor transportation system. These improvements should:

- Address capacity needs on the highway since travel by car, including HOVs, will continue to comprise the majority of trips in the corridor.

- Expand infrastructure that will serve and encourage alternatives to SOV trips, including carpools, vanpools, and transit.
- Increase options for non-motorized access to the coast, particularly for recreational trips.

3.1.2 Coastal Access and Resource Deficiencies

3.1.2.1 Coastal Access

Despite the numerous coastal recreational resources and many points of access to the coast in the corridor, access to coastal communities and coastal recreational and natural resources is hampered by the transportation system deficiencies and mobility constraints discussed in Section 3.1.1. Traffic congestion, travel delays, inadequate and infrequent transit facilities and services, and incomplete bike and pedestrian networks together lead to limits and difficulties for people accessing the coast. Demand for public access to coastal resources from within and outside the corridor will continue to grow. As the region's population continues to grow, San Diego County residents and people in the adjacent regions and beyond will seek access to the supply of coastal resources in the corridor, placing an additional increased demand on the region's transportation network related exclusively to coastal access. Existing and future opportunities for public access to the coast and upland recreation areas cannot be realized with the limited capacity of the existing transportation network.

In addition to corridor mobility issues, the NCC has water quality, lagoon, and natural habitat deficiencies. Such resource deficiencies at corridor beaches, lagoons and recreation areas have the potential to affect coastal access and recreation opportunities that may be dependent on the quality of the natural resources which sustain them.

3.1.2.2 Water Quality

Runoff from Corridor Urbanization, Development, and Transportation Facilities

Corridor urbanization and development has cumulatively affected water quality as impermeable surfaces have increased and vegetative cover has decreased. This has resulted in significant increases in stormwater pollutant loads and runoff velocity and volume, contributing to excessive erosion and sedimentation within corridor watersheds. Hydrology and water quality are also potentially affected in the coastal bluff areas of Del Mar along the rail facility where ongoing shoreline erosion problems caused by wave action require ongoing maintenance activities along or within the shoreline to ensure the facility is protected from failure.

The corridor transportation infrastructure generally contributes pollutants to surface waters, which are most often generated from roadways, parking lots, and disturbed landscapes. However, highway facilities are only a small percentage of the land area (2%) in the NCC and a relatively minor contributor to stormwater pollution. Potential pollutants from the roadway and slopes include sediment, nutrients (nitrogen and phosphorus) from native and ornamental vegetation, metals (copper, lead, and zinc), fertilizers, and pesticides. Other than runoff from parking structures associated with the rail facilities, runoff from rail improvements is relatively minor because there is limited impermeable surface area associated with rail lines.

The hydrology of the watersheds in the corridor has been directly altered by adjacent development and the existing highway and rail facilities, which have displaced watershed features including lagoon, river, stream, and drainage areas. In addition, realignment and/or channelization of inland waterways conveying stormwater through the watersheds to coastal water bodies have also resulted in significant modification to the hydrology of the corridor. The physical alterations of watershed features have resulted in a cumulative loss of wetland and riparian habitat areas that, in turn, has decreased the

valuable biological function of these areas to naturally filter sediment and pollutants in stormwater runoff prior to discharge to the lagoons and eventually the Pacific Ocean.

Level of Runoff Treatment

The majority of existing transportation facilities in the corridor were constructed before current regulations were enacted to control and treat stormwater discharge in order to protect and restore water quality. As such, many of the facilities do not include current retention or treatment methods for stormwater runoff. However, Caltrans recently developed and implemented a Best Management Practices (BMPs) pilot program for the corridor highway facility, which included detention devices at I-5 and Manchester Avenue**,** a wet basin at I-5 and La Costa Avenue, media filters at the La Costa Park & Ride and the SR-78 & I-5 Park & Ride, and a biofiltration system at I-5 and Palomar Airport Road. Consistent with federal and state law, as well as with the terms of its National Pollution Discharge Elimination System (NPDES) permit, Caltrans also implemented maintenance BMPs that include preventative measures to ensure that ongoing maintenance activities are conducted in a manner that reduces the amount of pollutants discharged to surface waters via Caltrans stormwater drainage systems. Maintenance BMPs are implemented in accordance with the Storm Water Quality Handbook–Maintenance Staff Guide, which provides detailed instructions on applying approved stormwater maintenance BMPs to maintain facility operations and highway activities in a manner that provides maximum protection of water quality.

Quality of Water Entering Lagoons and the Ocean

Existing water quality in the corridor is best characterized by the quality of water in receiving bodies. Within the corridor there are a number of impaired water bodies that, as defined by the Clean Water Act (CWA), do not meet water quality standards, and therefore cannot support the beneficial uses for which the water body has been designated. Impaired water bodies are also referred to as “water quality limited segments.” States are required to compile a list of impaired water bodies, referred to as the “Clean Water Act Section 303(d) List of Water Quality Limited Segments” (303(d) List). Within the corridor, Los Peñasquitos Creek, Los Peñasquitos Lagoon, Soledad Canyon Creek, Pacific Ocean at San Dieguito Lagoon, San Elijo, Agua Hedionda and Buena Vista Lagoons, Loma Alta Slough, the Pacific Ocean at the San Luis Rey River mouth and the San Luis Rey River are listed as impaired water bodies. Inland waterways that are tributaries of, or discharge into, these 303(d) impaired waters may also be considered part of the 303(d) listed water bodies.

A number of impaired water bodies were given special status under the CWA for which the state is required to identify waters that will not achieve water quality standards after application of effluent limits. For these impaired water bodies, states are required to develop plans for water quality improvement. The plans consider each water body and pollutant for which water quality is considered impaired, and include load-based (as opposed to concentration-based) limits called total maximum daily loads (TMDLs), which is the maximum amount of pollution (both point and non-point sources) that a water body can assimilate without violating state water-quality standards. Caltrans is included as a stakeholder for Investigation Order R9-2006-076 titled, “Owners and Operators of Municipal Separate Storm Sewer Systems, California Department of Transportation, Hale Avenue Resource Recovery Facility, and North County Transit District Responsible for the discharge of Bacteria, Nutrients, Sediment, and Total Dissolved Solids into impaired Lagoons and Adjacent Beaches and Agua Hedionda Creek.”

Pollutants discharging with a load or a concentration that commonly exceeds allowable standards and which are considered treatable by Caltrans approved treatment BMPs are referred to as Targeted Design Constituents (TDCs). TDCs in the corridor include sediment, metals (total and dissolved zinc,

lead, and copper), nitrogen, phosphorus, and general metals. Table 3-8 shows the 303(d) receiving water bodies within the corridor and the TDCs associated with them.

TABLE 3-8: SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS AND TARGETED DESIGN CONSTITUENTS

303(d) Impaired Water Body	Constituents of Concern	TDCs
Los Peñasquitos Creek	Phosphate & Total Dissolved Solids	Phosphate & Total Dissolved Solids
Los Peñasquitos Lagoon	Sedimentation/Siltation	Sedimentation/Siltation
Soledad Canyon Creek	Sediment Toxicity	N/A*
Pacific Ocean Shoreline/ San Dieguito	Indicator Bacteria	N/A*
San Elijo Lagoon	Indicator Bacteria & Sedimentation/ Siltation & Eutrophic	Sedimentation/ Siltation
Agua Hedionda Lagoon	Indicator Bacteria & Sedimentation/ Siltation	Sedimentation/ Siltation
Buena Vista Lagoon	Indicator Bacteria, Sedimentation Siltation & Nutrients	Sedimentation/Siltation/Nutrients
Loma Alta Slough	Indicator Bacteria & Eutrophic	N/A*
Pacific Ocean Shoreline/ San Luis Rey River	Indicator Bacteria	N/A*
San Luis Rey River	Chloride & Total Dissolved Solids	N/A*

Source: *http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/approved/r9_06_303d_reqtmdls.pdf*
http://www.stormwater.water-programs.com/wqpt/CoPM.asp?CO=SD&RTE=5

* Not determined to be a constituent found within Caltrans' stormwater runoff monitoring program

In addition to the adverse impacts of polluted stormwater runoff from corridor facilities and adjacent land uses, water quality is also adversely affected, particularly within the corridor lagoons, where fill embankments were used for bridge crossings for the existing highway and rail facilities. The fill embankments have substantially narrowed lagoon areas, thereby decreasing overall water circulation in the lagoon, and have contributed to and caused water stagnation. Filled to support rail or road crossings, the narrowed lagoon sections act as a partial dam, impeding the natural process of tidal flushing and slowing freshwater flows from inland waterways that convey sediment and pollutant loads to corridor lagoons during significant rainfall events. The result is a concentrated build-up of sedimentation and water pollutants within the lagoons, which substantially affects biological productivity and quality of coastal waters. The combined effects of polluted stormwater runoff from corridor facilities and adjacent land uses, the absence of current treatment methods for stormwater runoff, and the impacts of physically displacing or altering natural watershed features has resulted in impacted water quality in the corridor's coastal water bodies.

Deficiency. Coastal waterbodies in the corridor have experienced decades of degradation from direct and indirect impacts of development, including the transportation facilities that cross these resources, that has negatively affected water quality that is essential for protection of sensitive coastal resources and water-dependent recreation.

3.1.2.3 Lagoon Restoration

Coastal lagoons in the corridor have historically experienced not only adverse impacts to water quality but also impacts to the varied habitat areas, plant, and wildlife species supported within and adjacent to the lagoons. The same physical alteration of lagoon areas corridor development and urbanization, including highway and rail crossings and realignment and/or channelization of inland waterways, that have affected water quality have also directly affected habitat areas. In addition to direct displacement of habitat area resulting from construction of the corridor facilities, watershed alterations such as the diversion of freshwater from inland waterways, excess sedimentation and siltation, and, in some cases, reconfiguration of the lagoons' inlet at the ocean, have all contributed to degradation of lagoon resources. Modification to the natural process of lagoon breaching—a critical element providing flood relief, sediment transport to beaches, good water quality, and fish migration to and from the ocean and inland waterways—has particularly caused long-term impacts to lagoon habitats that are difficult to reverse without major restoration efforts.

Development encroachment has also reduced the amount and quality of transitional and upland habitat areas that typically provide buffers between adjacent land uses and the habitats and species supported by the lagoons. In some cases, development has occurred adjacent to the corridor lagoons creating a fixed and hard lagoon-habitat edge where there is no vegetative buffer that would typically minimize erosion and treat contaminated stormwater runoff along the lagoon periphery, protect lagoon habitats from the introduction of non-native and invasive plant species, and limit disturbance to wildlife.

Notwithstanding the current issues associated with degraded water quality—physical alteration of the lagoons and development encroachment on adjacent lands—the corridor lagoons provide significant benefits in their respective watersheds for flood relief (by allowing high flows to slow and disperse into the larger water bodies), and for water quality (where sediment loads, nutrients, and toxins from stormwater are discharged and absorbed by vegetation within the lagoon prior to entering the ocean). The lagoons also contain sensitive habitat areas for threatened and endangered species, migratory birds, fish, and many different wildlife species. In addition, where associated with open space and adjacent habitat preservation areas, the corridor lagoons provide critical habitat linkages and wildlife corridors in a coastal area that has experienced rapid population growth and urbanization over the last several decades. The corridor lagoons also provide exceptional public recreation amenities with trail systems, interpretative areas, wildlife observation opportunities, and, in some cases, wide expansive beach areas where the lagoons meet the ocean.

Ongoing lagoon resource management has been implemented and will continue to be essential in ensuring that the many flood, water quality, habitat, and recreation benefits of these significant watershed features are maintained and enhanced. Los Peñasquitos Lagoon, San Dieguito Lagoon, Batiquitos Lagoon, and Agua Hedionda Lagoon have been the subjects of restoration efforts that have included, among other things, inlet maintenance to allow for tidal circulation, water quality monitoring, and wetland and upland habitat restoration. While a number of stakeholder groups are coordinating restoration planning efforts for San Elijo Lagoon and Buena Vista Lagoon, these lagoons have yet to undergo major comprehensive restoration programs; however, both of the lagoons, along with Agua Hedionda Lagoon, are included on the 303(d) list of impaired water bodies. Collectively the lagoons are included in the 303(d) list as they exceed standards for eutrophication, sediment and coliform bacteria, and nutrients. Irrespective of current restoration efforts, all of the corridor lagoons require ongoing management to address the effects of increased year-round freshwater input, accelerated sedimentation and water contamination, reduced tidal mixing, introduction of exotic species, revegetation of disturbed areas, and impacts on habitats and wildlife from active recreation and adjacent development.

Deficiency. The coastal lagoons in the corridor have historically experienced adverse impacts to water quality and to the numerous and varied sensitive habitat areas, plant and wildlife species supported within and adjacent to the lagoons. Physical alteration of lagoon areas from construction of highway and rail crossings and realignment and/or channelization of inland waterways have affected water quality and directly affected sensitive habitat areas. Polluted stormwater runoff and historic development encroachment of adjacent land uses have also affected lagoon areas by degrading water quality and substantially reducing the amount and quality of transitional and upland habitat areas that typically provide buffers between adjacent land uses and the sensitive habitats and species supported by the lagoons. These impacts have occurred over decades and require substantial resources and major restoration efforts to remedy.

3.1.2.4 Natural Habitats

Quality of Existing and Potential Corridor Habitat Areas and Wetlands

The corridor supports a variety of environmentally sensitive habitat areas (ESHAs) as well as degraded habitat areas contained primarily in and around the coastal lagoons and the shoreline, inland waterways and undeveloped hillside areas, and mesas. The coastal lagoons and inland waterways support southern willow, mulefat scrub, freshwater marsh, southern willow scrub/freshwater marsh, southern arroyo willow woodland, coastal brackish marsh, southern coastal salt marsh, salt marsh transition, mud flat, salt flat, open water, San Diego mesa hardpan vernal pool, and eelgrass, salt flat, and other open water habitat. Several sensitive upland habitats are also included in the corridor including coastal sage scrub, baccharis scrub, maritime succulent 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. Non-native grassland and non-native woodland areas are also present in the corridor and have the potential to provide valuable nesting, roosting and foraging habitat.

ESHAs in the corridor have the potential to support threatened and endangered plant and wildlife species. While several significant stands of native wetland and upland habitat areas have been preserved in, and adjacent to, the lagoons and other protected open space areas, the development of transportation facilities and adjacent development, realignment and/or channelization of inland waterways, armoring of the shoreline, vegetation clearing and thinning for fire protection of adjacent development, and rapid spread of exotic plant materials that supplant native plant species, have all had a cumulative effect on the corridor's natural environment.

The peripheries of the corridor lagoons are particularly subject to habitat disturbance and degradation, most often resulting from development encroachment, intense recreational use, and lack of adequate upland habitat buffers. In the corridor, these impacts are demonstrated by areas of severely degraded habitat void of vegetation, and areas of disturbed southern arroyo woodland and salt marsh and coastal brackish marsh. These areas have suffered from excessive erosion and have become infested with non-native and invasive plant species. In addition, wetland and riparian habitats typically found in inland waterways have been severely degraded by previous realignment and channelization of the corridor streams and drainages by both transportation improvements and adjacent land development. Several of the small streams and drainages that have been channelized are void of permeable surface and vegetation while other areas that have not been channelized continue to support some disturbed southern willow scrub, mulefat scrub, freshwater marsh, southern arroyo woodland, and salt marsh/brackish marsh. As with the disturbed habitat areas around many lagoon peripheries, the NCC's smaller inland streams and drainages experience excessive erosion and infestation of non-native and invasive plant species.

Development encroachment adjacent to the NCC's lagoons and other inland waterways has caused a chronic loss of transitional habitat and has reduced the overall biological diversity of the resource, severed connections between coastal waterbodies and upland habitat, and limited the ability of the resources to evolve in response to environmental conditions such as sea level rise. In addition, development encroachment has eliminated natural buffers that provide water-quality benefits and that limit disturbance of wildlife from adjacent land uses.

Upland habitats, including Diegan coastal sage scrub, southern maritime chaparral, native and non-native grassland, provide habitat for certain endangered and threatened species and serve as important buffers and transitional habitat for the corridor lagoons and inland waterways. These upland areas also provide wildlife corridors that connect remaining coastal and inland habitat areas, which allows for wildlife movement. Urbanization has caused reductions in upland habitat, resulting in areas with large openings of bare earth or areas that are vegetated with non-native species. Many of the disturbed upland areas in the corridor occur along trails or adjacent to development. The existing transportation facilities currently act as barriers to wildlife migration where lagoons, rivers, creeks, and the surrounding upland habitat would otherwise provide corridors for wildlife to cross between inland and coastal areas. Many of the existing highway and rail bridges have steep, narrow abutments at lagoon crossings or channelized drainages that wildlife cross under.

Populations of Threatened or Endangered Plants and Animals

Residential development and agriculture have imperiled a number of threatened and endangered plant species in the corridor; however, perhaps the most significant risk to special-status plant species and native habitats is incremental displacement by exotic and invasive plant species. Species including pampas grass, ice plant, African fountain grass, African veldt grass, and onion weed have become increasing problems as they spread along the transportation ROW. African veldt grass is spreading into the habitats around the lagoons, and tamarisk, arundo, castor bean, and fennel are common invasive species within the wetland habitats of the corridor. Eelgrass is considered a special aquatic site and is found in the open water areas of Batiquitos and Agua Hedionda Lagoon. Eelgrass beds are threatened by *Caulerpa* toxic algae and have specific regulations concerning impacts and mitigation.

The NCC includes critical habitat for the least Bell's vireo, southwestern willow flycatcher, tidewater goby, and California gnatcatcher and is frequented by a number of other special-status wildlife species. Declines in these sensitive wildlife populations have occurred because of habitat loss and fragmentation resulting primarily from urban and agricultural development, degradation of feeding and nesting habitat, human disturbance, and predation. In the case of tidewater goby, stream culverts and water diversions, riparian habitat loss, sediment loads within the streams, and introduced predators threaten the species and limit the potential for tidewater goby to occur in the corridor. Indirect impacts to threatened and endangered species are caused by night lighting, exposure to air and water pollutants, edge effect exposure to adjacent land uses, and noise.

Deficiency. Incremental loss of habitat areas resulting from urbanization in the corridor, including the existing transportation facilities, has resulted in significant cumulative impacts to open space areas, lagoon and inland waterways, transitional and upland habitats and the numerous special status plant and animal species they support. As a result, sensitive resources including wetlands, critical habitat, sensitive plant and animal species, and surface waters have continued to decrease in abundance and quality.

3.2 THE CORRIDOR VISION

Addressing transportation and coastal resource deficiencies, constraints and needs in the NCC requires a comprehensive approach that can achieve specific objectives while being sensitive to competing goals. SANDAG and Caltrans have set forth a vision for transportation in the corridor that will enhance access to the coast and trigger enhancements to coastal resources.

The corridor vision includes a multi-modal transportation program that both encourages alternatives to SOV travel and addresses the growing travel demands in the corridor. Due to the large volume and diversity of trips in the corridor, improving and maintaining access and mobility cannot be achieved by focusing efforts on a single mode; therefore, the vision for the multi-modal corridor:

- Expands rail corridor train and passenger capacity and improves trip reliability.
- Addresses highway operational deficiencies to improve trip reliability.
- Focuses highway-capacity improvements on carpool, bus rapid transit (BRT), and vanpool facilities to move more people and not only cars.
- Reduces travel times and acts as an incentive to use HOVs.
- "Manages" the carpool/vanpool lanes by selling, through tolls, excess capacity to SOV drivers.
- Uses the fee revenue to support corridor transportation, including services like expanded park and rides and BRT on the managed lanes.
- Eliminates barriers and closes the gaps in the bicycle and pedestrian route and trail network to improve local and recreational access to coastal resources.
- Protects and enhances natural resources, coastal resources, and corridor lagoons.

SANDAG (and Caltrans) has also directly linked these multi-modal transportation improvements to coastal access and resource enhancements through adoption of:

- The Regional Comprehensive Plan (RCP) and Smart Growth Opportunity Areas map that promotes pedestrian-friendly development near transit stations to encourage more walking, biking, and transit trips and to preserve open space and natural habitat areas.
- The Environmental Mitigation Program (EMP) that funds (via *TransNet,* the voter-approved local transportation sales tax) resource enhancement projects as part of specific transportation projects.

3.2.1 Rail Vision

Consistent with their RTP, SANDAG envisions a coastal rail corridor that is capable of providing more frequent passenger and freight service with little conflict or delay. The 2007 *LOSSAN Final Program EIR/EIS* recommends rail improvements to:

> "… develop a faster, safer and more reliable passenger rail system that provides added capacity in response to increased travel demand…between Los Angeles, Orange and San Diego Counties (between Los Angeles Union Station and San Diego Santa Fe Depot)."[10]

The vision for 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:

[10] *LOSSAN Final Program EIR/EIS* (Section 1-2), September 2007.

- Double-track projects to reduce and eliminate single-track segments to increase capacity and reliability, and reduce travel time.
- Trackwork improvements such as stub tracks, layover tracks, and track cross-overs to improve operations and reliability.
- Bridge replacements to improve the safety of existing services.
- Expansion of parking at rail stations to enhance access.
- Fund additional transit connections that encourage alternatives to parking at rail stations.

The planned improvements would:

- Allow the COASTER to operate with 20-minute peak-period frequency, which would result in as many as 54 trains per day versus the 26 trains per day under current conditions (including weekend and off peak service).
- Make it easier and more convenient for park-and-ride passengers to access stations.
- Increase COASTER ridership from 6,000 to 12,900 a day with capacity to accommodate 20,000 passengers a day, which equates to approximately one lane of traffic being diverted off I-5 during the peak period.[11]

In addition to infrastructure and operational improvements along the rail corridor, the NCC area contains more than a dozen planned and potential Smart Growth areas, including those located at each of the LOSSAN rail corridor stations, with the exception of Sorrento Valley Station (Figure 3-15**)**. SANDAG's RTP is founded on local jurisdiction commitments to Smart Growth in which transportation infrastructure and services are coordinated with land-use plans to help avoid increased traffic congestion, reduced mobility, and a deteriorating quality of life. This sustainability strategy uses transportation investments, or "Smart Growth carrots," to encourage growth and development in urbanized areas and away from open spaces and sensitive environmental resources. Additionally, SANDAG investments attempt to put transit where it works, "by focusing transit investments in areas with land uses to support an efficient transit system." These roadway and transit investments would discourage sprawl by implementing projects in urban and suburban areas and not rural areas. Smart Growth areas are planned for higher-density, mixed-use developments that are pedestrian friendly and transit-oriented. Not only do these areas focus development away from natural environments and open space, experience and research have found a higher proportion of trips are made by transit, foot, and bike in Smart Growth areas. This position to focus development and infrastructure improvements in already developed areas is also supported by Coastal Act Section 30250:

> "(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. "

[11] Assume: 20,000 rider capacity for LOSSAN corridor; 75% of rail trips will be during the 6 hour peak periods (20 min frequency during the peak, 60 minute frequency during off-peak); 2,100 cars per hour per lane capacity; 1.2 average automobile occupancy.
Calculation: 20,000 * 0.75 = 15,000 rail trips during peak period; 15,000/6 = 2,500 rail trips per hour; 2,500/1.2 = 2,083 car trip equivalent; 2,083/2,100 ≈1 lane of traffic

3.2.2 Highway Vision

The vision and purpose of the highway improvements as defined in the I-5 NCC Project Draft EIR/EIS is:

> "… to maintain or improve the existing and future traffic operations in the I-5 north coastal corridor in order to improve the safe and efficient regional movement of people and goods for the planning design year of 2030."[12]

This vision has its foundation in SANDAG's highway strategy, detailed in the RTP, which focuses on a system of managed lanes throughout the region, including the NCC. Managed lanes are high-occupancy vehicle (HOV) lanes, which, in addition to providing uncongested travel for carpools, vanpools and transit, sell excess capacity to SOVs while maintaining free-flowing conditions.

Managed lanes on I-5 would provide travelers with the option to save time and money by carpooling rather than driving alone on congested freeway mainlanes. They also offer SOV drivers the choice to save time for a user fee, generating funds that can be used to further improve the transportation system, including funds for planned BRT service that would travel on the managed lanes in the corridor. California Assembly Bill 2032 (AB 2032) initially authorized the designation of certain California highway lanes as high-occupancy toll (HOT) or managed lanes. In authorizing the facilities, the Legislature found that managed lanes:

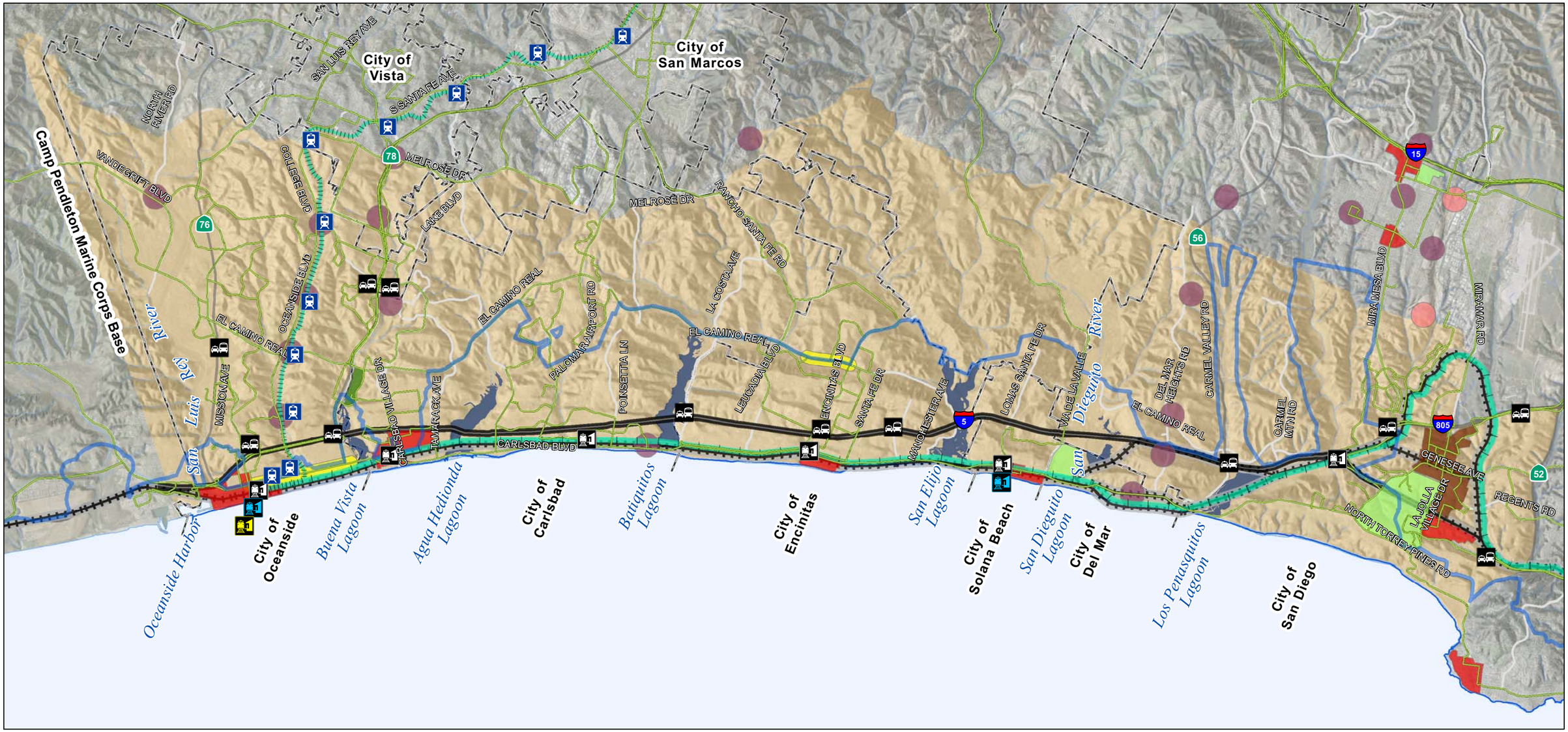
> "(b) … provide an additional choice for users... Research has illustrated that utilizing an HOV lane for a fee with assured reliable time savings is valuable to persons across the income spectrum. The income profile of HOT lane users does not differ greatly from that of adjacent mixed-flow lanes.
>
> (d) By providing the consumer a choice of paying a direct user fee for utilizing the unused capacity of the transportation system during peak periods, HOT lanes establish an equitable means of assessing a fee that is directly related to the burden placed on the transportation system…"

AB 2032 cites additional benefits that managed lanes can have on highway corridors, including reducing congestion and travel time across all lanes and the potential to finance congestion relief measures. As the authorizing legislation states, managed/HOT lanes:

> "(c) …create an alternative mechanism for financing transportation projects… used for transit services, highway maintenance, and other improvements...
>
> (f) HOT lanes increase the efficiency of the transportation system by taking advantage of existing capacity without forfeiting the congestion mitigation and air quality benefits provided by HOV lanes.
>
> (g) Revenue… reinvested in projects and services that provide traffic congestion relief."

While managed lanes provide a revenue-generating source for transit and transportation improvements, their primary objective is to shift SOV drivers to carpools and transit with the incentive of free-flow travel on the managed lanes; therefore, through technology, the lanes are "managed" to increase the toll charged for SOVs as traffic congestion on the managed lanes increases. The elasticity of demand results in fewer SOVs on the managed lanes as tolls increase. Toll pricing is established to guarantee free-flow conditions for carpools, vanpools, and transit.

[12] *I-5 NCC Project Draft EIR/EIS* (Section 1-2), June 2010.



NORTH

- North Coast Corridor Travel Shed
- Coastal Zone Boundary
- City Boundary

- Existing Park and Ride
- COASTER Station
- Metrolink Station
- Amtrak Pacific Surfliner Station

- SPRINTER Station
- COASTER
- SPRINTER
- Public Bus Route

- I-5 NCC Project Area
- LOSSAN Project Area
- Interstate
- State Route
- Major Arterial

Potential Smart Growth Areas

- Community Center
- Mixed Use Transit Corridor
- Special Use Center
- Town Center

Existing/Planned Smart Growth Areas

- Community Center
- Town Center
- Urban Center

0 1 2 4 Miles

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

FIGURE 3-15

Smart Growth Concept Map

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For the overall transportation system, managed lanes in the NCC offer multiple benefits including:

- **Faster Travel Times** – A managed lane trip through the corridor (La Jolla Village to SR 78) is projected to be 30 minutes faster in the afternoon peak period than a trip on the general-purpose lanes in 2030.
- **Reliable Travel Times** – Because the toll for SOVs increases as traffic volumes on the managed lanes increase, the lanes are managed to guarantee free-flow travel for HOVs, resulting in predictable and reliable travel for managed-lane trips.
- **Expanded Highway Capacity** – At capacity, managed lanes are expected to carry 8,000 people per hour during peak periods compared to 4,000 people per hour on a general-purpose lane, providing an efficient approach for expanding the capacity of the highway (moving people vs. cars).
- **Source of Revenue** – Revenue from SOV users of the managed lanes system could provide millions of dollars annually toward the support of transit services and transportation improvements in the corridor.
- **Emission Reduction** – Free-flow travel results in less exhaust emissions per vehicle than congested traffic. The free-flow condition of the managed lanes and anticipated congestion reduction (reduced delay) on corridor general-purpose lanes would help reduce emissions per traveler in the corridor. A higher percentage of travel by HOVs would lead to less emissions per person trip and correspondingly less GHGs emissions in the corridor.
- **Flexibility** – The ability to manage the use and vehicle composition of managed lanes provides great flexibility for changing the way they are used in the future. Changes could respond to changing technology, land use, travel patterns, travel demand, economic conditions, and other travel characteristics and could include requiring higher vehicle occupancy and greater use of transit, or creating a truck route during certain times of day.

Managed lanes help make alternative modes of travel such as carpools, vanpools, and transit more competitive with driving on highway general-purpose lanes. As a result, managed lanes increase transportation capacity in an efficient manner, minimizing both infrastructure requirements and impacts. Overall, managed lanes I-5 would greatly improve access and mobility in the coastal corridor.

Although Caltrans recently extended the I-5 HOV lane (one in each direction) north to Lomas Santa Fe Drive/Manchester Avenue, most of the corridor does not have HOV facilities. SANDAG and Caltrans envision four managed lanes for the NCC—two in each direction. The managed lanes would be in the median of the highway, accessible at designated points from general-purpose lanes and via direct access ramps (DARs) from arterial streets at key locations. DARs would provide priority, unimpeded access to managed lanes to further encourage carpool and transit use. To complement the managed lanes, the following operational improvements are being considered for the highway corridor:

- Potentially adding two general-purpose lanes (one in each direction) to improve operational flow and capacity
- Operationally improving general-purpose lanes at 13 locations
- Improving traveler information to alert travelers to traffic conditions so that they can make informed decisions about routes and time of travel
- Managing and integrating systems, including interconnecting ramp meters

3.2.3 Bicycle and Pedestrian Vision

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. Much of the existing fragmented routes and trails would be upgraded and completed by eliminating barriers and gaps as part of the larger rail and highway transportation program. The addition of managed lanes on I-5 would include reconstructing under- and overpasses, which presents an opportunity to connect and improve bicycle and pedestrian routes to the coast. Additionally, routes across lagoons would be similarly integrated into highway improvements. Pedestrian bridges and improved at-grade crossings along the LOSSAN rail corridor would provide new and improved, safe, and convenient pedestrian and bicycle crossings over the tracks, better connecting communities to area beaches.

In addition, SANDAG prepared a draft Bicycle Master Plan that encourages the development of a unified bicycle system throughout the San Diego region and serves the diverse needs of bicycle riders by providing connections between activity centers, transit facilities, and regional trail systems. Segments of the Coastal Rail Trail are among the region's highest priorities based on demand and facility type. One focus of this document is to improve bike and pedestrian network connectivity and links to the region's major bicycle facilities, like the Coastal Rail Trail, including around and across the I-5 and LOSSAN rail corridors. The TREP/PWP would reduce I-5's non-standard east-west *bike* crossings from 35 to 11 and I-5's non-standard east-west *pedestrian* crossings from 22 to 6. In addition, six enhanced bike/pedestrian crossing are planned. **Table 3-9** summarizes the planned improvements:

TABLE 3-9: EAST-WEST BICYCLE AND PEDESTRIAN CROSSINGS (I-5)

Facility Type	Existing Bicycle Facilities	Future Bicycle Facilities	Existing Pedestrian Facilities	Future Pedestrian Facilities
Non-Standard	35	11	22	6
Standard	4	27	15	26
Enhanced	0	1	0	5

Source: San Diego NCC– CSMP (Chapter 7), July 2010.

3.2.4 Coastal Resources Vision

The California Coastal Commission has the responsibility to: "Protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations." The beaches, lagoons, state parks, recreational facilities, and other coastal resources in the NCC are regional and statewide assets that shape the character of the natural and built environment along the north coast. As residents and the agencies responsible for these resources look toward the future, they desire and are required to protect and enhance these assets and resources for human enjoyment and environmental preservation.

The Goals. The protection and enhancement of coastal resources envisions:

- *Ensuring access* to beaches and coastal recreational areas for residents and visitors;
- *Improving the water quality* of lagoons, beaches, and inland streams and drainages;
- *Restoring the lagoons* to enhance their biological diversity and value; and
- *Enhancing and expanding natural habitat* areas.

3.2.4.1 Ensuring Access

The Coastal Commission is charged with ensuring that all members of the public have access to coastal resources under Section 30001.5(c) of the Coastal Act:

> Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resource conservation principles and constitutionally protected rights of private property owners.

Coastal resources in the corridor include the beaches, parks, lagoons, upland trails, and activity and recreational centers such as Del Mar Fairgrounds and Racetrack. Corridor improvements would reduce or eliminate access impediments for both local residents and visitors. Demand for access to coastal resources continues to increase, and road, freeway, and rail facilities that provide access to coastal resources would become more congested and less reliable. The I-5 NCC and LOSSAN rail corridor programs of improvements would focus on the efficient movement of people. In addition, bicycle and pedestrian routes that are currently incomplete, not built to current standards, or not available for access to coastal areas in the NCC would be upgraded and/or connected. To ensure continued access opportunities, mobility across all modes would be preserved and improved. The expectation of the public and requirement of the Coastal Commission is that coastal access and recreational resources would be not just protected but instead would be improved over time.

3.2.4.2 Improve Water Quality

The Coastal Act requires that marine resources be maintained, enhanced, and restored and that special protection be given to areas and species of special biological importance or economic significance. The Coastal Act further requires that use of marine environments sustain the biological productivity and qualities of coastal waters and streams, and maintain healthy populations of all species and marine organisms. The Coastal Act also mandates that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored through means such as minimizing adverse effects of stormwater runoff and minimizing alteration of natural streams, and by maintaining natural buffer areas that protect riparian habitats.

Every coastal and inland waterbody in the corridor provides benefits in terms of flood relief, and potentially provide ESHAs and other habitats that support threatened and endangered species, migratory birds, fish, large mammals, and many different wildlife species. This program provides an opportunity to restore and maintain water quality throughout the corridor's watersheds, which is essential to the protection of these sensitive coastal resources.

3.2.4.3 Restore Lagoons

Lagoons provide significant benefits in their respective watersheds for flood relief, water quality, and maintenance of ESHAs that support threatened and endangered species; migratory birds, fish, large mammals, and many different wildlife species. In addition, where associated with major open space and adjacent habitat preservation areas, the corridor lagoons provide critical habitat linkages and wildlife corridors in a coastal region that has experienced rapid population growth and urbanization over the last several decades. The corridor lagoons also provide exceptional open space and scenic resources, and public recreational resources with trail systems, interpretative areas, wildlife observing opportunities, and, in some cases, wide expansive beach areas where the lagoons meet the Pacific Ocean.

Many of the lagoons have been the subject of past and ongoing restoration programs and significant restoration efforts for San Elijo and Buena Vista Lagoons are currently in the planning phase. There is the potential to restore tidal circulation in each of these lagoons as part of the restoration programs

being considered, which would significantly improve the ecological health of the lagoons and adjacent areas and, in turn, better support ESHAs, degraded habitats, special-status species, and wildlife. As these are the only two lagoons in the corridor that have yet to be subject to extensive restoration efforts, they are the current focus of numerous resource agencies and stakeholders. The lagoon conservancies, resource agencies, the Coastal Commission, and this program of projects place a high priority on progress toward ultimate restoration and long-term maintenance of these and the other lagoons in the corridor.

3.2.4.4 Natural Habitats

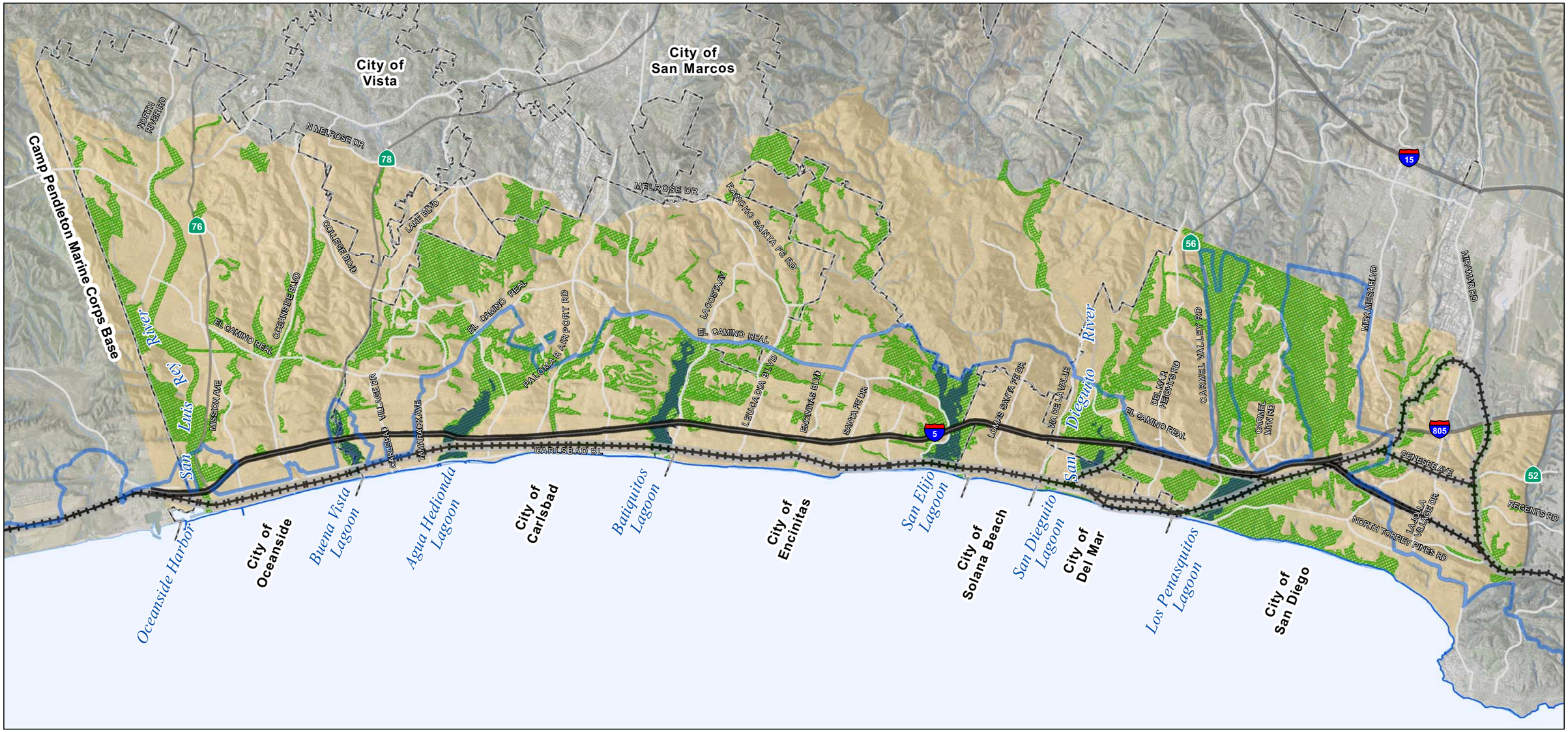
The Coastal Act requires that ESHAs be protected against significant disruption of habitat values, and that proposed development adjacent to ESHAs and parks be designed to prevent adverse impacts to those areas and be compatible with their continuance. Figure 3-16 highlights the preservation areas designated by SANDAG in the NCC. The program seeks to strategically acquire and preserve ESHAs and degraded habitat areas in conjunction with implementing habitat restoration and creation opportunities throughout the corridor.

3.3 IMPLEMENTING THE COMPREHENSIVE VISION

Moving forward with a balanced approach to transportation project implementation and resource enhancement would help achieve the coastal and mobility vision for the NCC. Transportation project implementation would address mobility needs while the associated resource enhancement program would address coastal resource protection, restoration, and enhancement needs. As a program, the TREP/PWP is intended to accommodate corridor and regional growth in population and travel in an environmentally sustainable way. Through the program, coastal resource restoration, enhancement and expansion would be facilitated by environmentally sensitive engineering, redevelopment that incorporates design measures to accommodate resource restoration and enhancement programs, timing and phasing of corridor improvements, and by implementing a corridor-wide resource enhancement program focused on improving water quality, and coastal and upland natural habitat areas. These transportation improvements would also ensure continued and enhanced access to existing and improved coastal and upland recreational facilities. To be successful, the transportation program must include transit, highway, bike, and pedestrian improvements. Corridor customers vary widely and include commuter, recreational, business, freight, and other customers. These different markets require different transportation solutions.

Caltrans and SANDAG have already taken a number of steps toward achieving the vision for the corridor. Travel times and reliability are expected to improve on the LOSSAN rail corridor due to recent rail projects, and operational strategies have been implemented on I-5 to increase capacity and accommodate demand without increasing the transportation infrastructure footprint. These include:

- In Oceanside, double-tracking a 1.2-mile segment of the corridor and replacing the bridge over Loma Alta Creek.
- Implementing one HOV lane in each direction between I-805 and Manchester Avenue using the median shoulder of the freeway.
- Using SANDAG's subsidized vanpool program, which has 186 vanpools with destinations in the NCC, serving approximately 1,500 people each day.
- Implementing intelligent transportation systems, including ramp metering, changeable message signs, and the new Traveler 511 service that debuted in 2007, providing motorists and other travelers with real-time information on traffic conditions, and transit services to help make informed decisions about which routes and modes to use.



NORTH

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

0 1 2 4 Miles

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

FIGURE 3-16

Land Preservation Areas

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Consistent with this program, SANDAG and Caltrans have included a comprehensive program of lagoon restoration and habitat expansion in the corridor to mitigate both past and future transportation-project impacts. Specifically, plans to improve the hydrological regime and marsh habitat in San Elijo Lagoon are currently being coordinated by SANDAG and Caltrans with support from the City of Encinitas, the U.S. Army Corps of Engineers (USACE), the US Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), the County of San Diego, and the San Elijo Lagoon Conservancy. As noted, plans to improve the Buena Vista Lagoon are also in process. SANDAG has contributed funding toward planning, research, and study that would ultimately restore many acres of wetland and enhance overall lagoon functions, including funding the environmental document for the San Elijo Lagoon Restoration. Further, using *TransNet* Environmental Mitigation Program funding, Caltrans has acquired properties for habitat preservation, restoration, and/or creation.

Future improvements to the NCC transportation facilities offer an opportunity to reverse and correct damage to coastal resources and improve the overall function of the I-5 highway corridor and the LOSSAN rail corridor. The NCC program envisions implementation of a comprehensive, corridor-wide program to restore water quality and habitat. Implementing a corridor-wide water-quality enhancement program would help to restore watershed features lost by construction of transportation facilities and other development. Lengthened bridges and reduced footprints from structural supports would restore water and tidal circulation of lagoons, improve conveyance of stream flow and sediment transport from inland areas, facilitate passage of fish and other aquatic species, and restore natural shoreline processes thereby enhancing biological productivity of marine resources. Existing transportation facilities in conjunction with new transportation facility projects would be reviewed and retrofitted to the maximum extent practicable with the best available technology to include BMPs to treat water quality within the corridor's watersheds.

Through the NCC program, significant marine resources and long-term biological productivity of coastal waters can be enhanced and restored by developing and implementing a comprehensive resource enhancement program. The program would include major lagoon restoration programs to improve tidal circulation in the San Elijo and Buena Vista Lagoon systems, preservation and/or restoration via land purchase of upland habitat areas, and restoring riparian habitat areas within inland waterways in the corridor. As noted, restoring tidal circulation would significantly improve the ecological value of the lagoons and adjacent areas to better support ESHAs, degraded habitat areas, special-status species, and wildlife. Because San Elijo and Buena Vista Lagoons have yet to benefit from restoration efforts, they are the current focus of numerous resource agencies and stakeholders.

Consistent, comprehensive, and proactive resource planning and management is necessary to effectively restore and preserve ESHAs and degraded habitat areas. Such an approach addresses individual project-specific impacts locally and regional cumulative resource impacts. The end result of transportation project implementation through the TREP/PWP would be a coordinated and comprehensive program for mitigation that exceeds traditional and often fragmented project-specific mitigation benefits by strategically acquiring and preserving ESHAs and degraded habitat areas in conjunction with habitat restoration and creation opportunities. New and improved transitional habitat and buffer areas, restored riparian corridors, and preservation and/or restoration of habitat area via the purchase of upland habitat adjacent to corridor lagoons would help address water quality and the habitat needs of special-status and wildlife species. This would help achieve the overall goal of enhancing biodiversity and habitat value in the corridor and the region's Environmental Mitigation Program.

3.3.1 TREP/PWP Contributions to the Region's Sustainability Program

The region utilizes and promotes a variety of sustainability programs, policies and strategies, as described in Section 2, to develop an integrated approach to solving potentially conflicting goods movement, transportation, and resource protection issues both within and outside the NCC. The TREP/PWP would support the region's existing integrated sustainability strategies and coastal policies by reducing energy consumption and associated air emissions, facilitating opportunities for smart growth and multimodal transportation that supports economic prosperity, and preserving and enhancing the area's natural resources.

3.3.1.1 Reducing Energy Consumption and Air Emissions

Among the fundamental purposes of the TREP/PWP are extending transit service and providing the infrastructure needed to facilitate new transit service and smart growth to reduce congestion on the existing transportation system and provide and improve multimodal transportation in the corridor. These improvements would inherently serve to minimize energy consumption and air quality emissions, while protecting, promoting and enhancing a variety of public access and recreational resources in the corridor as mandated by the Coastal Act.

As detailed in Section 5.1, implementing the proposed TREP/PWP improvements would minimize energy consumption and emissions from travel to, from, and within the corridor, and would be consistent with the policy objectives of the San Diego County Air Pollution Control District or the State Air Resources Board. Implementing proposed improvements in the LOSSAN corridor would reduce delays and therefore reduce emissions from idling locomotives. Increased frequencies and reduced travel times are also expected to increase ridership on LOSSAN passenger services and reduce automobile trips, vehicle miles traveled, vehicle hours traveled, energy, and associated emissions.

Proposed transportation improvements would reduce congestion and encourage alternative modes of travel to SOVs, which would lead to more efficient use of fuel, reduced idling times, and corresponding energy and air pollution reductions. Transportation-related GHG emissions are in large part determined by the sum of individual travel choices, as well as other important factors like land use patterns and vehicle fuel efficiency. Additional auxiliary and managed lanes, new and expanded park-and-ride facilities, improved bicycle and pedestrian features, ramp metering, and an improved transit-highway interface would likely improve traffic conditions and encourage alternative transportation modes, and thus reduce energy consumption, as more people carpool or choose other modal options. By accommodating current and projected growth in traffic demand in the existing transportation corridor, indirect and inefficient routing on parallel roads would be reduced. Finally, the TREP/PWP includes a program of multimodal transportation enhancements including trails, bike paths, and pedestrian improvements that would facilitate non-motorized circulation across the transportation facilities throughout the corridor.

Accordingly, implementation of the proposed TREP/PWP would be consistent with the regional plans developed to improve energy efficiency and reduce air quality and greenhouse gas emissions.

3.3.1.2 Facilitating Smart Growth, Multimodal Transportation, and Economic Sustainability

The NCC's public transit network provides links between the corridor's origins and destinations, and beyond. Intercity, commuter and light rail (along with buses, vanpools and paratransit) all contribute to the network. However, at existing levels of service and with current land use patterns, public transit is unable to compete with the private automobile in meeting transportation demand in the corridor on a large scale. New and expanded transit services, coupled with the limited amount of remaining undeveloped land in the corridor, has fostered development of a regional Smart Growth policy intended

to integrate land use and regional transportation resources. The proposed TREP/PWP transportation improvements and community, pedestrian and trail enhancements would be consistent with regional smart growth plans by focusing multimodal transportation facilities and services into Smart Growth and developed areas.

As detailed in Section 5.2 of the TREP/PWP, both the proposed rail and highway projects would increase travel capacity in the corridor, thereby reducing travel times and improving quality of service. These effects could potentially contribute to economic growth by allowing time and money previously spent on travel to be used for other purposes, by attracting businesses and residents to places with increased accessibility or improved quality of life, and by reducing overall costs to society.

While corridor population and travel are expected to increase over the next 20 years, this growth will occur regardless if TREP/PWP program improvements are implemented.[13] By allowing approved and concentrated growth to occur in the already urban corridor, supported by sufficient public infrastructure and services, additional growth is not forced to spill over into undeveloped or rural area. Focusing investment on facilities that encourage alternative modes of transportation, such as improvements to the existing LOSSAN rail corridor, introducing managed lanes on I-5 that allow for bus rapid transit (BRT) and encourages HOVs, and developing bicycle lanes, sidewalks and trails, would assist in concentrating future growth into urban areas where corresponding travel demand can be accommodated by a combination of these alternative modes of transportation.

3.3.1.3 Preserving and Enhancing Natural Resources

The NCC is recognized for a number of unique and significant marine and environmentally sensitive resource areas. The coastal watersheds, lagoons and upland areas in the corridor consist of a range of diverse habitats and ecosystems that support a variety of plant and wildlife species. The region's resources warrant protection and enhancement in light of increasing population demands and development pressures to ensure long-term viability of natural resources in accordance with regional sustainability measures.

Coastal Access to Natural Areas

The corridor's most significant natural resource areas, such as the corridor's beaches and six coastal lagoons, also support some of the region's most significant passive and active coastal recreational opportunities for San Diego residents and visitors. The region's Coastal Regional Sediment Management Plan recognizes the value of the corridor's natural areas, particularly shoreline and beach areas, for sustaining recreation and tourism. In addition to addressing issues associated with shoreline erosion and sand supply, the region's many policies and programs facilitating Smart Growth and multi-modal transportation address not only the need to preserve and enhance natural areas, but also to provide and enhance physical access to the corridor's natural recreation areas for public use and enjoyment.

Proposed TREP/PWP improvements are necessary for maintaining and enhancing public access to the corridor's coastal areas by extending and improving transit service, reducing transportation congestion, particularly for the variety of coastal users in the corridor, providing adequate public transportation and non-automobile circulation that support access to coastal recreational areas, and providing and/or enhancing recreational facilities.

As detailed in Section 5.3, rail improvements that increase capacity, reduce travel time, increase reliability, and provide new service area opportunities, such as those proposed, are major contributors

[13] *I-5 North Coast Corridor Project Draft EIR/EIS*, June 2010.

to protecting and enhancing access to the coast. Further, as the primary means for the public to reach shoreline access points and 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 TREP/PWP improvements focusing on HOV/managed lanes would give priority to ride-sharing, public transit and toll-paying SOVs (when capacity allows) while reducing overall congestion and facilitating public access on San Diego's primary transportation facilities. The proposed TREP/PWP would ensure that the corridor's large and varying customer base of HOVs, many of which are seeking access to coastal resources, would be provided with uncongested, reliable travel times. TREP/PWP 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. The addition of managed lanes on I-5 includes the reconstruction of under- and overpasses, which presents an opportunity to connect and improve bicycle and pedestrian routes to the coast, including routes across lagoon systems. Pedestrian bridges and improved at-grade crossings along the LOSSAN rail corridor would also provide new and improved pedestrian and bicycle crossings over the tracks, better connecting communities to area beaches.

Water Quality, Wetlands and Environmentally Sensitive Habitat Areas (ESHA)

Specific to the proposed TREP/PWP, *TransNet* EMP funds have been programmed for the corridor and implementation of the NCC transportation projects allows for expenditure of the EMP funds. Due to the availability of these funds, there are opportunities to initiate land acquisition, undertake habitat enhancement and creation, and make progress toward lagoon restoration in advance of the transportation projects with appropriate agreements in place. This comprehensive programmatic approach to mitigating transportation impacts also offers a rare opportunity to achieve large-scale, coordinated environmental benefits throughout the corridor.

As detailed in Sections 5.4 and 5.5 of the TREP/PWP, reduction in vehicle miles traveled with the implementation of the rail Improvements, in conjunction with the proposed highway improvements that would specifically target improving water quality on I-5, would reduce and better treat the pollutant burden in stormwater runoff from area highways resulting in a beneficial impact to water quality and overall enhancement of coastal waterbodies. In addition, it is anticipated that proposed bridge replacement projects over the lagoons, and other coastal waterbodies, could have a beneficial effect on hydrology and water quality by constructing new bridges that better convey flood waters, allow for improved tidal flushing, and thereby improve water quality and wetland habitat.

In addition, the TREP/PWP includes a Resource Enhancement Program as part of the phased TREP/PWP implementation plan. The proposed Resource Enhancement Program provides for expenditure of EMP funds on resource enhancement activities that focus on advanced habitat creation/restoration, enhancement, preservation, and improving the ecological health of sensitive habitats and coastal wetlands in the TREP/PWP corridor via capital improvement activities, ongoing maintenance, and critical planning activities that improve and/or sustain the ecological functioning of the resource. Implementation of the TREP/PWP would facilitate acquisition and restoration of upland and wetland habitat areas throughout the corridor, and could facilitate major lagoon restoration programs that include improved tidal circulation in the San Elijo and Buena Vista Lagoon systems. Restoring tidal circulation in corridor-wide lagoon systems would significantly improve water quality and the ecological value of the lagoons and adjacent areas to better support ESHAs, special-status species and wildlife.

Site Stability and Management

Consistent with the goals of the region's Coastal Regional Sediment Management Plan, the TREP/PWP includes a number of measures addressing site erosion and sedimentation and shoreline processes, in conjunction with the challenges presented by sea level rise, which are critical factors affecting efforts to restore and maintain coastal beaches and lagoons. Section 5.8 describes the constraints and opportunities the TREP/PWP provides to address issues of shoreline management, including a unique opportunity to improve the coastal bluff area in Del Mar with a future option to remove the existing rail service from the bluff area. The TREP/PWP further addresses minimizing shoreline alteration for transportation infrastructure improvements, and designing such improvements with consideration of the potential impacts of sea level rise resulting from global climate change.

Agricultural Resources

SANDAG's RCP, focusing on Smart Growth opportunities, provides the means for developing the region in a way that focuses growth within urban areas served by a multi-modal transportation system, which in turn reduces urban sprawl into the region's rural areas thereby preserving open space, agricultural and natural resource areas in the corridor and beyond. Proposed TREP/PWP improvements would support efforts to concentrate development in urban areas with existing public infrastructure and services, and thus avoid public infrastructure and service extensions to support new development encroachment into undeveloped areas that may otherwise displace rural, agricultural areas. In this regard, TREP/PWP improvements would support the region's efforts to protect open space areas, including agricultural and natural resource areas.

Further, as the primary coastal access corridor in the NCC, the proposed highway improvements are critical to goods movement which has a direct affect on the viability of agricultural operations in the region and the state. As detailed in Section 5.9, the majority of agricultural commodities in California are transported from farms to markets via ground transportation, thus, the ability to transport local agricultural commodities through vital arteries such as the I-5 to large markets is also critical to preservation and continued viability of agricultural operations in the NCC and throughout the Coastal Zone. Moreover, close proximity of transportation corridors to agricultural areas reduces costs associated with transporting commodities, and the reliability of these transportation corridors is necessary to ensure delivery and equitable distribution of commodities and fair financial return to producers.

The TREP/PWP would further establish an Agricultural Resource Impact Mitigation Fee program[14] that could provide a number of new opportunities to preserve and maintain a variety of agricultural resources and activities in the corridor to mitigate for TREP/PWP impacts to agricultural resources occurring along the highway facility. The opportunities range from supporting efforts to preserve large agricultural lands and/or operations to extending or providing new community gardens in the corridor, such as the potential TREP/PWP community enhancement project proposed in Oceanside (Enhanced Pedestrian Overpass Connection on Bush Street).

Other Corridor Resources: Archaeological, Paleontological and Visual Resources

Many of the region's programs and policies that facilitate protection of open space and natural resource areas also protect the region's rich deposits of archaeological and paleontological resources, as well as the significant visual resources that occur throughout the corridor. As detailed in Section 5.6,

[14] The Agricultural Resources Impact Mitigation Fee program would be established to offset permanent impacts to land designated as Prime Farmland in the NCC. The fee would be based on net acreage of affected Prime Farmland and would reflect the approximate cost of preserving Prime Farmland elsewhere in the Coastal Zone. Mitigation fees may be deposited with the State Coastal Conservancy Fund or the County of San Diego, as applicable and expended according to an established order of priority.

TREP/PWP improvements would protect archaeological and paleontological resources from substantial adverse impacts through sensitive site design and appropriate mitigation measures

The corridor's most significant natural resource areas provide some of the region's most significant viewsheds. Much of the NCC's existing rail and highway system parallels the Pacific Ocean's coastline and, in many locations, the transportation facilities offer expansive views of the coastline, river valleys, coastal lagoons, beaches, and other upland scenic resources. As detailed in Section 5.7, proposed TREP/PWP improvements would protect views to and along the ocean and scenic coastal areas, and would be visually compatible with the character of surrounding areas through sensitive site design, restoration and enhancement of areas adjacent to and affected by corridor improvements, and through avoiding significant development encroachment into adjacent open space areas and landform alteration. In addition, Community Enhancement projects included in the TREP/PWP would provide opportunities to enhance visual resources and create new scenic viewing areas by constructing trail and sidewalk improvements that would provide continuity in physical and visual access to and around coastal visual resources, and by enhancing open space areas throughout the corridor.

3.3.2 Benefits of the Build Alternative

Table 3-10 provides an assessment of the ability to achieve the transportation and environmental vision and goals without (No Build) and with (Build) implementation of the NCC transportation projects. Qualitative performance assessments were made relative to existing conditions and indicate that the project would provide no change from existing conditions, improve on existing conditions, or degrade from existing conditions. As shown, in most cases, implementation of the TREP/PWP would support the vision and goals for the I-5 highway and LOSSAN rail corridors, whereas, the No Build Alternative will not support the vision and likely contribute to further degradation of the transportation corridors and coastal resources.

The program would provide an improved outcome for all coastal resource vision areas. While coastal access may degrade only slightly with no corridor improvements, the improvements would greatly benefit coastal access. Water quality in the corridor would only continue to degrade without improvements. Lagoons would continue to degrade as well, and with planned improvements, restorations would significantly improve the status of the lagoons. While much of the corridor's existing natural habitat would remain whether improvements are made or not, this program offers the unique opportunity to add new ESHAs to the corridor.

Improvements to and/or the introduction of rail, bicycle, pedestrian, and HOV/Managed Lanes facilities would provide more travel choices to the corridor. Capacity improvements would increase corridor person throughput on all modes while focusing on the movement of people, not automobiles, thereby addressing predicted growth in population and travel demand while maintaining reasonable and reliable travel times. Concentrated investment in an already developed corridor around Smart Growth nodes would further the regions goals for an improved connection between transportation and land use.

The vision and goals for both coastal resources and transportation facilities can be achieved through a partnership of transportation and environmental projects. The transportation projects planned for the NCC include the companion Environmental Mitigation Program (EMP) to help restore, enhance, and expand coastal wetlands, freshwater wetlands, and upland areas in the corridor. The EMP is funded through the *TransNet* local transportation sales tax. Over the next decade (through 2017), the I-5 *TransNet* EMP funding (in 2002 dollars) includes:

- $173 million for coastal wetland mitigation
- $3 million for freshwater wetland mitigation
- $29 million for upland mitigation[15]

These funds are specifically programmed for the NCC corridor and implementation of the I-5 NCC transportation projects would allow for expenditure of the EMP funds. Due to the availability of these funds, there are opportunities to initiate land acquisition, undertake habitat enhancement and creation, and make progress toward lagoon restoration in advance of the transportation projects with appropriate agreements in place. This comprehensive programmatic approach to mitigating transportation impacts also offers a rare opportunity to achieve large-scale, coordinated environmental benefits in the corridor.

Because the EMP funding is tied to implementation of the I-5 NCC transportation projects, the ability to achieve the same level of coastal access and environmental improvements without the transportation improvements would be greatly curtailed if not eliminated altogether. Implementation of the NCC transportation projects would make funding available from the *TransNet* EMP to implement lagoon restoration, water quality, and habitat improvements in the corridor.

Collaborative implementation of the transportation program and projects through the NCC TREP/PWP would help:

- Expand coastal access;
- Improve water quality;
- Support lagoon restoration;
- Jump-start habitat creation; and
- Meet corridor transportation needs.

[15] SANDAG *TransNet* Capital Improvement Plan (CIP).

TABLE 3-10: ACHIEVING THE VISION WITH NO BUILD AND BUILD ALTERNATIVES

Corridor Vision (and applicable factors)	No Build	Build	Notes
Enduring Beach and Coastal Access – Coastal Access Routes: Accessibility for all modes – Coastal recreation facilities	○	●	• Two million annual beach visits in the corridor • Significant and desirable improvements to beach, recreational, and other coastal resource access • A majority of visitors arrive by carpool yet congestion and parking are problems • Build Alternative reduces congestion, especially for carpools and buses, improves local pedestrian and bike access, and makes transit a more viable alternative for tourist and leisure trips
Water Quality Improvements – Level of runoff – Treatment of runoff	○	●	• Currently, some runoff from existing I-5 corridor goes untreated • Build Alternative would include improvement to treat new runoff as well as some existing runoff • Transportation improvements would include design measures (bridge crossings, smaller footprint) that accommodate restoration plans and include improvements in tidal circulation and that better convey flows under facilities from inland areas.
Lagoon Restoration – Lagoon health	○	●	• San Elijo and Buena Vista Lagoons are experiencing degradation • Restoration plans are in process; however, funding is limited. Transportation improvements include a companion Environmental Mitigation Program that would contribute to the restoration efforts. • Transportation improvements would include design measures (bridge crossings, smaller footprint) that accommodate restoration plans and include improvements in tidal circulation.
Enhanced and Expanded Natural Habitat – Wetland – Upland – Coastal Bluff	◐	●	• Wetland and upland habitat areas are located on edges of existing I-5 highway corridor and LOSSAN rail corridor and would be affected by any widening. • Acquisition and restoration of natural habitat provides opportunities for protection and enhancement of habitat values that substantially exceeds potential impacts of transportation improvements • Del Mar Bluffs are experiencing significant erosion and are affected by the LOSSAN rail corridor. Tunnel and removal of tracks from the bluff would eliminate need for ongoing maintenance of shoreline protection structures and could lead to bluff restoration.

● Better than Existing Conditions ◐ Same as Existing Conditions ○ Worse than Existing Conditions

TABLE 3-10: ACHIEVING THE VISION WITH NO BUILD AND BUILD ALTERNATIVES (CONTINUED)

Corridor Vision (and applicable factors)	No Build	Build	Notes
More Travel Choices – Roads: Highways, Arterials, Local Streets, Carpool – Transit: Rail, Bus – Bicycle and Pedestrian	◐	●	• Under Build Alternative, the performance of all modes—highway, transit, bicycle, pedestrian—would improve. • Under Build Alternative, transit, carpool, walk, and bicycle would become more desirable alternatives to SOVs
Shorter Travel Times – Highway Travel Time – Rail Travel Time	○	●	• Free flow corridor travel time is 24 minutes – provided in managed lanes • Forecasted No Build Alternative 2030 corridor travel time in the PM peak is 120 minutes • General-purpose travel times reduced by shift of vehicles to managed lanes • Rail improvements lead to increased speeds and shorter travel times
Reliable Travel Times – Highway Congestion – Rail Delays	○	●	• Build Alternative provides guaranteed travel time in managed lanes • Double-tracking and other rail improvements reduce rail conflicts, increase speeds, and enhance operations
Transportation/Land Use Coordination – Reduces Sprawl – Connects Communities – Promotes Smart Growth	◐	●	• Transportation/land use connection encouraged by concentrating transportation improvements in an already developed corridor, thereby preserving other undeveloped areas. • More frequent, fast, and reliable rail service in the corridor encourages higher density development around stations

● Better than Existing Conditions ◐ Same as Existing Conditions ○ Worse than Existing Conditions

4.0 SCOPE OF PLANNED IMPROVEMENTS

In order to address the corridor's needs and vision, a balanced approach is necessary. This chapter describes the comprehensive program of NCC improvements including those to the LOSSAN rail corridor; the I-5 highway corridor; other corridor transportation facilities; community, pedestrian, bicycle and recreational infrastructure; and the corridor's natural resources and environment. Corridor projects have been developed in response to existing infrastructure deficiencies and the need for both coastal resource protection and enhancement, and transportation improvements.

A balanced, integrated approach to addressing these issues will enable implementation of solutions for both the I-5 corridor and LOSSAN rail corridor facilities, commensurate with unique resource enhancement opportunities. Protection and enhancement of coastal resources and improved mobility are necessary to maintain and improve quality of life of the coastal communities in the corridor, and to ensure continued use and enjoyment of coastal resources for the millions of people that visit the corridor each year.

The coastal resource and mobility visions for the NCC represent ongoing efforts of the region and state to balance the needs of a large metropolitan area with the protection, enhancement, and accessibility of some of the region's and state's most valued resources. Residents, elected officials, businesses, and environmental stewards expect that such a balance will be maintained. As a result, the corridor program addresses and integrates the vision, goals, and needs of the region's transportation system and the coastal resources present within the corridor.

The program of improvements is described in the following sections and illustrated in Figure 4-4A through Figure 4-4G.[1]

4.1 LOSSAN RAIL CORRIDOR

The *LOSSAN Final Program EIR/EIS* (September 2007) included programmatic level plans for rail in the NCC. The *San Diego – LOSSAN Corridor Project Prioritization Analysis* (July 2009) quantified operational improvements and other benefits and impacts of potential rail projects, and then prioritized implementing these projects to optimize phased improvements. Phases are divided into near- (79 trains weekday schedule), mid- (93 trains) and long-term (119 trains) implementation. Some projects were recommended for a long-range vision phase due to various factors.

The projects under consideration are described in Figure 4-1 and Table 4-1. They include a mix of double tracking, other track capacity enhancements (cross-overs, station 'stub' tracks, station pass-through tracks), rail bridge replacement, pedestrian crossings, vehicle crossing improvements, parking expansion, new platform locations, and other station enhancements. Generally, track projects directly improve capacity and, therefore, improve reliability, reduce travel times and provide the opportunity for increased service levels. Other improvements may increase access to rail or improve the passenger experience, which may lead to increased ridership. Rail corridor improvements that improve the movement of freight fall under Surface Transportation Board (STB) exclusive jurisdiction, and, pursuant to federal law, are exempt from State and local regulatory processes and therefore are not subject to PWP requirements. These track capacity, bridge replacement, grade separation and tunnel projects, as described below, are not exempt, however, from the Coastal Commission's federal consistency review process to determine consistency with the federally certified CCMP.

[1] As multiple I-5 alternatives are under consideration, Figure 4-4A through Figure 4-4G illustrate the "10+4 with Barrier" alternative, which has the largest footprint.

Several LOSSAN rail projects will be constructed outside of the NCC. While they are not located within the NCC, these projects will improve rail travel times, reliability, and access within the corridor.

4.1.1 Track Capacity

More than half of the entire San Diego coastal rail corridor is single track (30.7 miles), which creates choke points when trains traveling in opposite directions meet. These conflicts create most of the delay in the corridor and corridor-wide double tracking is necessary to sufficiently increase capacity and service. The LOSSAN rail program in the NCC would include double-tracking projects ranging in length from 0.6 to 2.9 miles. Other track improvements similarly increase capacity and decrease conflicts, which improves reliability and decreases travel times.

4.1.1.1 Double Tracking

- **#3[2] – CP East Brook to CP Shell:** Add a second main track and replacement of San Luis Rey River Bridge in the 0.6-mile segment from Control Point[3] (CP) East Brook to CP Shell in Oceanside. This results in a 3.6-mile stretch of double track from CP Westbrook to CP Longboard and is currently in the planning stages with environmental permitting still required. The improvements increase on-time performance for Metrolink and northbound Amtrak and reduce delays for southbound Metrolink trains. This project is recommended for implementation in the mid-term phase.
- **#6 – Carlsbad Village Double Track:** Construct a 1.0-mile second main track and straighten a curve from Mile Post (MP) 228.5 to MP 229.5 including through the Carlsbad Village Station. This leads to a 3.6 miles stretch of double track from CP Shell to CP Carl. The existing single track bridge across Buena Vista Lagoon would be supplemented with a parallel single track bridge. This project is in the planning stage and is planned to be implemented in the mid-term phase.
- **#8 – Carlsbad Double Track:** Construct 1.9 miles of a second main track and replacement of the Agua Hedionda Bridge from CP Carl to CP Rarr in Carlsbad. Extends an existing section of double track to the south resulting in 5 miles of double track to CP Ponto. Environmental permitting and design for this project is complete and completion is expected within the next two to four years.
- **#10 – CP Ponto to CP Moonlight:** Between CP Ponto and CP Moonlight construct 2.7 miles of a second main track, replace the Batiquitos Lagoon Bridge, and expand the La Costa Avenue grade separation. This results in 5.8 miles of double track from CP Farr to CP Moonlight. This project is in the planning stages. It is recommended to be implemented in the long-term phase in order to enable the third service expansion.
- **#14 – CP Moonlight to CP Swami:** Add a second main track for the 0.8 miles between CP Moonlight and CP Swami resulting in a 2.4-mile stretch of double track from CP Moonlight to CP Cardiff. This improvement is in the planning stages and is planned for implementation in the long-term as it only provides minor reductions in delay until higher service levels are implemented.
- **#15 – CP Cardiff to CP Craven:** Construct 1.5 miles of double track, improve a grade crossing, and replacement of the San Elijo Bridge. These projects would result in 4.2 miles of double track from CP Swami to CP Valley. This project is currently in the conceptual engineering stage with implementation planned for the mid-term phase.

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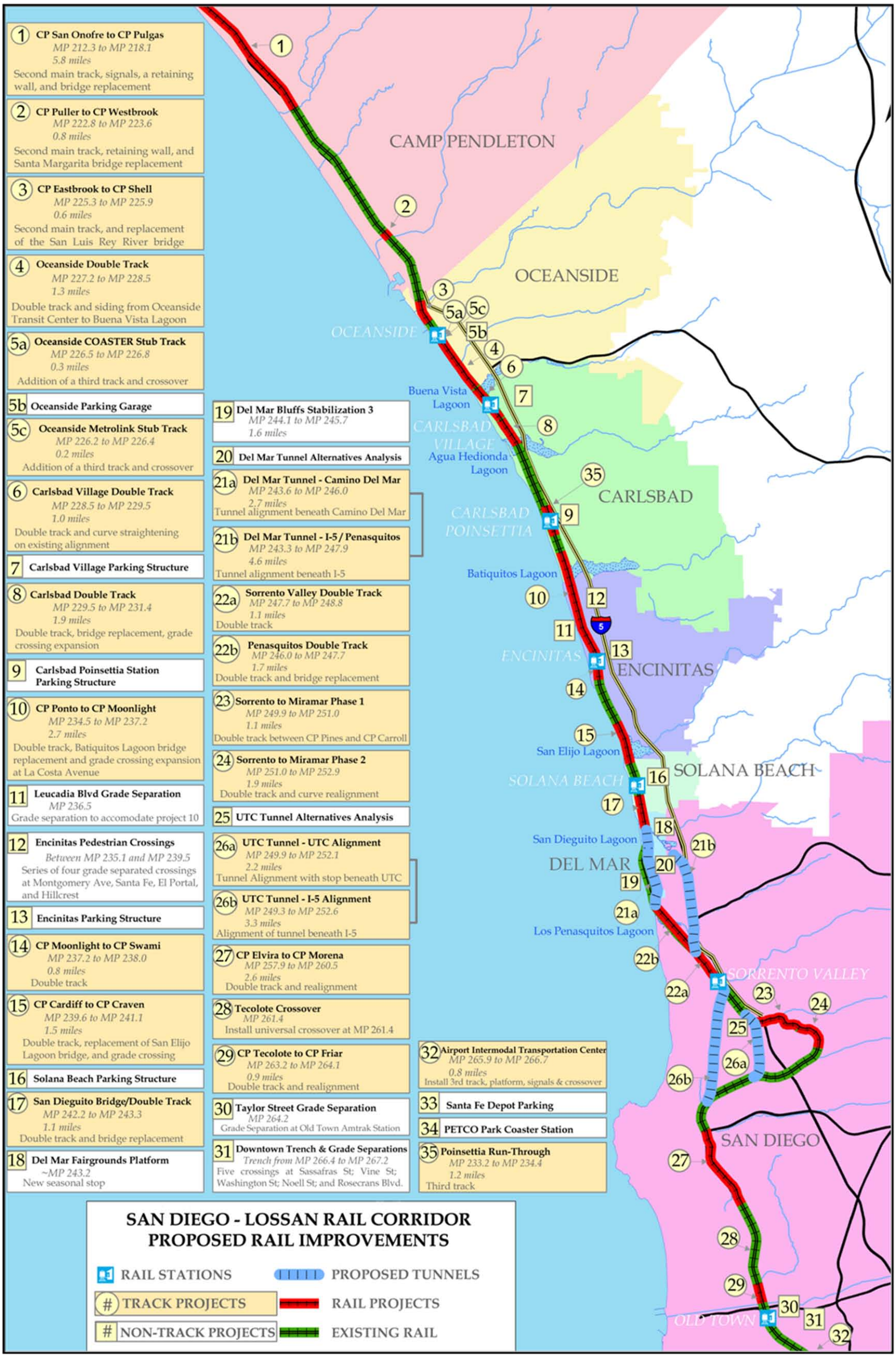
[2] Each LOSSAN project number corresponds to the project number the *San Diego-LOSSAN Corridor Project Prioritization Analysis Final Project Report*, July 2009. These numbers are used to retain consistency through LOSSAN project documents.

[3] A control point is the location of a track signal or other marker that dispatchers specify when controlling trains. Control points are used to define project extent.

FIGURE 4-1: PROPOSED RAIL IMPROVEMENT PROJECTS (SAN DIEGO – LOSSAN CORRIDOR)



Source: San Diego – LOSSAN Corridor Project Prioritization Analysis, Final Project Report, July 2009.

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TABLE 4-1: LOSSAN RAIL CORRIDOR PROJECTS

#	Project	Location	Description	Extent (miles)	Phase	Prioritization
1	CP San Onofre to CP Pulgas**	Camp Pendleton	Double track; signals; retaining wall; bridge replacement	5.8	Planning	Near
2	CP Puller to CP Westbrook (Santa Margarita)**	Camp Pendleton	Double track; replacement of Santa Margarita Bridge; retaining wall	0.8	PS&E	Implementing
3	CP Eastbrook to CP Shell (San Luis Rey)	Oceanside	Double track; San Luis Rey River Bridge replacement	0.6	Planning	Mid
4	Oceanside Double Track	Oceanside	Double track; siding extension, from Oceanside station to Buena Vista Lagoon	1.3	Construction	Implementing
5a	Oceanside Station COASTER Stub Track	Oceanside	Addition of a third track and crossover to south of station to accommodate COASTER trains	0.3	Planning	Near
5b	Oceanside Parking Garage	Oceanside	Addition of a parking garage	-	Planning	Long
5c	Oceanside Station Metrolink Stub Track	Oceanside	Addition of a third track and crossover to north of station to accommodate Metrolink trains	0.2	Planning	Near
6	Carlsbad Village Station Double Track	Carlsbad	Double track; curve straightening on existing alignment	1	Planning	Mid
7	Carlsbad Village Parking Structure	Carlsbad	Addition of a parking structure	-	Planning	Long
8	Carlsbad Double Track	Carlsbad	Double track; bridge replacement; two grade crossings	1.9	CE	Near
9	Carlsbad Poinsettia Parking Structure	Carlsbad	Addition of a parking structure	-	Planning	Long
10	CP Ponto to CP "Moonlight"	Encinitas	Double track; Batiquitos Lagoon Bridge replacement; grade crossing expansion	2.7	Planning	Long
11	Leucadia Blvd. Grade Separation	Encinitas	Grade separation at Leucadia Blvd.	-	PE/EC	-
12	Encinitas Pedestrian Crossings	Encinitas	Grade separated crossings at Montgomery, Santa Fe, El Portal, Hillcrest		PE/EC	Near
13	Encinitas Station Parking Structure	Encinitas	Addition of a parking structure	-	Planning	Mid
14	CP "Moonlight" to CP Swami	Encinitas	Double track	0.8	Planning	Long
15	CP Cardiff to CP Craven	Encinitas	Double track; replace San Elijo Lagoon Bridge, grade crossing at Chesterfield	1.5	CE	Mid
16	Solana Beach Parking Structure	Solana Beach	Addition of a parking structure	-	Planning	Mid
17	San Dieguito Bridge/Double Track	Del Mar	Double track, replacement of San Dieguito Bridge	1.1	Planning	Long
18	Del Mar Fairgrounds Permanent Seasonal Platform	Del Mar	Add stop when fair is in session	-	Planning	-
19	Del Mar Bluffs Stabilization Project 3	Del Mar	Replace track bed support that has eroded, protect bluff face and reinforce the bluff toe	1.6	CE	-
20	Del Mar Tunnel Alternatives Analysis	Del Mar	Conduct study of tunnel alignment alternatives	-	Planning	-
21a	Del Mar Tunnel – Camino Del Mar alignment	Del Mar	Alignment of tunnel & double track beneath City of Del Mar; at-grade double track from 243.7 to 247.9	2.7	Planning	-
21b	Del Mar Tunnel – I-5 Peñasquitos alignment	Del Mar	Alignment of tunnel & double track underneath I-5	4.6	Planning	-
22a	Sorrento to Torrey Phase 1	Del Mar	Double track between CP Carmel Mountain and CP Torrey	1.1	PE/EC	Near
22b	Sorrento to Torrey Phase 2	Del Mar	Double track between CP Sorrento and CP Torrey and replacement of Los Peñasquitos bridge	1.7	Planning	-
23	Sorrento to Miramar Phase 1	San Diego	Double track between Sorrento and Miramar (CP Pines to CP Carroll)	1.1	PE/EC	Near
24	Sorrento to Miramar Phase 2	San Diego	Extend double track from Phase I; curve realignment	1.9	Planning	Long
25	UTC Tunnel Alternatives Analysis	San Diego	Conduct study of tunnel alignment alternatives	-	Planning	-
26a	UTC Tunnel – UTC Alignment	San Diego	Alignment of tunnel and stop beneath University Town Center	5.6	Planning	-
26b	UTC Tunnel – I-5 Alignment	San Diego	Alignment of tunnel underneath I-5	8.1	Planning	-
27	CP Elvira to CP Morena**	San Diego	Double track, realignment	2.6	Planning	Mid
28	Tecolote Crossover**	San Diego	Install universal crossover at MP 261.4	-	PE/EC	Near
29	CP Tecolote to CP Friar**	San Diego	Double track	0.9	Planning	Long
30	Taylor Street Grade Separation**	San Diego	At Old Town Amtrak station	-	Planning	-
31	Downtown Rail Trench & Grade Separations**	San Diego	At Sassafras, Vine, Washington, Noell, & Rosecrans	-	Planning	-
32	Airport Intermodal Transportation Center**	San Diego	Addition of third track and intermodal transit station	0.8	Planning	-
33	Santa Fe Depot Parking**	San Diego	Station improvements	-	Planning	Mid
34	PETCO Park COASTER Station**	San Diego	COASTER station at Park Blvd, near existing Trolley Station	-	Planning	-
35	Poinsettia Run-Through	Carlsbad	Third track through Carlsbad Poinsettia station	1.2	CE	Near

CE – Conceptual Engineering PE/EC – Preliminary Engineering and Environmental Clearance PS&E – Plans, Specifications & Estimates
*** Project is outside of NCC*

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- **#17 – San Dieguito Bridge/Double Track:** Construct 1.1 miles of second main track and replace the San Dieguito River Bridge from CP Valley to CP Crosby, which would result in a 2.8-mile stretch of double-track from CP Craven to CP Del Mar. This project is currently in the planning stage. It requires environmental permitting and is recommended for the long-term implementation phase.
- **#22a – Sorrento Valley Double Track:** Construct 1.1 miles of a second main track between CP Carmel Mountain and CP Torrey. This project is undergoing preliminary engineering and environmental clearance. It is planned for near-term implementation as it alleviates residual delay and improves on-time performance for all corridor users.
- **#22b – Peñasquitos Double Track:** Construct 1.7 miles of a second main track and bridge replacements through Peñasquitos Lagoon from CP Sorrento to CP Carmel Mountain. As this project would differ based on the alignment of a Del Mar Tunnel, the project is recommended for the vision phase.
- **#23 – Sorrento to Miramar Phase I:** Construct 1.1 miles of a second main track from CP Pines to CP Carroll north of Miramar Hill. This project is under design and funded through state goods movement funds. It is recommended for near-term implementation.
- **#24 – Sorrento to Miramar Phase II:** Construct 1.9 miles of a second main track and curve realignment from CP Carroll to CP Cumbres north of Miramar Hill. This project is in the conceptual engineering stage and recommended for implementation in the long-term phase.

4.1.1.2 Other Track Improvements

- **#5a – Oceanside Station COASTER Stub Track:** Add a third track and crossover connecting to the south end of the Oceanside Transit Center track and running parallel to the through tracks for 0.3 miles. The tracks would accommodate COASTER trains but would reduce delays to all operators by reducing congestion during peak-hour service. This project is currently in the design stage with environmental permitting required and is planned for near-term implementation.
- **#5c – Oceanside Station Metrolink Stub Track:** Add a third track and crossover connecting to the north end of the Oceanside Transit Center track and running parallel to the through tracks for 0.2 miles. The tracks would accommodate Metrolink trains but would reduce delays to all operators by reducing congestion during peak-hour service. This project is currently in the design stage with environmental permitting required and is planned for near-term implementation.
- **#19 – Del Mar Bluffs Stabilization Phase 3:** The replacement of eroded track bed support, protection of bluff face and reinforcement of bluff toe from MP 244.1 to MP 245.7 along the Del Mar Bluffs. This project is in design.
- **#35 – Poinsettia Run-Through:** Construction of 1.2 miles of a third track through Carlsbad Poinsettia Station. This project is in design, is recommended for near-term implementation, and will alleviate delays for all rail operators in the corridor.

4.1.2 Bridge Replacement

Bridges throughout the corridor would be replaced in order to accommodate double tracking. Additionally, many bridges have been in service for many years and are in need of replacement or serious overhaul. Other existing bridges may need a parallel bridge built to support corridor double tracking. Bridge replacements would include the San Luis Rey River Bridge, Buena Vista Lagoon Bridge, Batiquitos Lagoon Bridge, San Elijo Lagoon Bridge, San Dieguito Bridge, and Los Peñasquitos Bridge (under some alternatives). All bridges would be double-tracked. In some situations, bridge spans would be lengthened and bridge footprint would be reduced due to changes in bridge design and

construction materials, including replacing creosote piles with longer spans and concrete piles. Some bridges may be lengthened to ensure there is no net increase in fill in the lagoons. Track improvements that cross lagoons and therefore include bridge replacements are the following (additional information about each project is provided in Section 4.1.1):

- **#3 – CP East Brook to CP Shell:** Includes San Luis Rey River Bridge.
- **#6 – Carlsbad Village Double Track:** Includes Buena Vista Lagoon Bridge.
- **#8 – Carlsbad Double Track:** Includes Agua Hedionda Bridge.
- **#10 – CP Ponto to CP Moonlight:** Includes Batiquitos Lagoon Bridge.
- **#15 – CP Cardiff to CP Craven:** Includes San Elijo Bridge.
- **#17 – San Dieguito Bridge/Double Track:** Includes San Dieguito River Bridge.
- **#22b – Peñasquitos Double Track:** Includes bridge replacements through Peñasquitos Lagoon.

4.1.3 Station and Parking Improvements

The following station and parking improvements at corridor stations would increase passenger capacity, improve service, and enhance quality of service. These improvements are subject to PWP requirements.

- **#5b – Oceanside Parking:** The addition of 500 spaces at the existing Oceanside Transit Center to accommodate additional riders who access the station by private automobile. This project is currently in the planning stage, still requires environmental permitting, and is planned for implementation in the long-term phase.
- **#7 – Carlsbad Village Parking:** The construction of a parking structure with 300 additional spaces at the Carlsbad Village COASTER station. This project is in the planning stages, requires environmental permitting, and is planned for the long-term implementation phase.
- **#9 – Carlsbad Poinsettia Parking:** The construction of a new parking structure with 700 additional spaces at the Carlsbad Poinsettia COASTER station. This project is in the planning stages, requires environmental permitting, and may face community opposition. This project is prioritized as a long-term project to support the third service expansion.
- **#13 – Encinitas Station Parking:** The construction of a parking garage with 600 additional spaces at the Encinitas COASTER station. This project is in the planning stages and recommended for mid-term implementation.
- **#16 – Solana Beach Parking:** The construction of a parking structure with 700 new spaces at the existing Solana Beach station. This project is in the planning stages and recommended for mid-term implementation.

Some station platform projects would improve access from special activity centers to the corridor's passenger rail services. Within the corridor, one station platform project would be considered:

- **#18 – Del Mar Fairgrounds Platform:** Construct a new seasonal platform for the Del Mar Fairgrounds along the existing railway and near the fairgrounds. The platform would provide seasonal access for special events. A draft *Del Mar Fairgrounds Permanent Seasonal Rail Platform Conceptual Engineering and Environmental Constraints Report* was presented to the SANDAG Transportation Committee in May 2009. This study has two options for a seasonal platform: a 600-foot option, which would accommodate about 1,900 passengers, and a 1,000-foot option, which would accommodate about 3,200 passengers. Both alternatives would be located on the east side of the tracks. Ramps and steps would provide a direct link to the Fairgrounds parking

lot. Both the platform and track are elevated in order to be higher than the flood plain and meet grade requirements at Via De La Valle. Additionally, a second track would be constructed over the San Dieguito River to allow for through trains to pass (Project #17). While the platform would improve the viability of rail travel for special events, it is not integral to achieving service expansion and therefore not included in the final prioritized projects list.

Outside of the corridor, projects include #32 – Airport Intermodal Transportation Center and #34 PETCO Park COASTER Station. These stations will provide access points for trips with origins or destinations or pass through the NCC. Specifically, major tourism activity centers in the Gaslamp District (PETCO Park) and Lindbergh International Airport will be connected to coastal recreation facilities in the NCC. Additionally, if the Miramar Hill alternative for a University City tunnel were to be implemented, a new underground station would be constructed at University Towne Centre (UTC).

These station and parking improvements projects may be subject to coastal development permit or PWP requirements.

4.1.4 Grade Separation

Grade separations between rail and automobiles, pedestrians, and/or bicycles improve safety as well as performance for all modes. In the corridor, projects would include the following grade separations:

- **#11 – Leucadia Boulevard Grade Separation:** The construction of a grade separation at Leucadia Boulevard (MP 236.5) is not recommended in the near- or long-term implementation phases due to limited improvement to rail capacity and heavy impacts on existing rail service during construction.
- **#12 – Encinitas Pedestrian Crossings:** Four grade-separated crossings at Montgomery, Santa Fe, El Portal, and Hillcrest. These crossings will create connections and provide access between residential areas and Cardiff State Beach, Swami's Beach and San Elijo Lagoon along with other coastal resources. These projects are planned for near team implementation and in the preliminary engineering and environmental clearance stage.

4.1.5 Tunnels

Within the corridor, two tunnels were proposed in the 2030 RTP. The rail service simulations in the San Diego – LOSSAN Corridor Project Prioritization Analysis found that the long-term (2030) service scenario chould be delivered without the tunnels. Tunnel alignments are undecided and will be determined through an alternatives analysis.

In Del Mar, a tunnel would move the rail line away from the Del Mar bluffs, which are susceptible to failure and unable to accommodate double tracking due to the significant excavation, stabilization, and ongoing maintenance needs of such a facility. There are two alternatives included in the LOSSAN Final Program EIR/EIS. The first would run underneath Camino Del Mar where tracks would then connect with the existing LOSSAN alignment across Los Peñasquitos and San Dieguito Lagoons. The second alternative tunnel would run under I-5 and daylight along the southern bluffs of the San Dieguito Lagoon. Tracks would reconnect with the existing LOSSAN rail corridor at-grade near the Del Mar race track. Should either of these tunnel options be selected, the existing rail track on the Del Mar bluffs would be removed from service. Further study is needed on these alternatives.

In the University City area, a tunnel would significantly improve travel time by avoiding the circuitous Miramar Curve. Additionally, both alternatives would be double tracked and therefore improve capacity. The first tunnel alternative would be via a tunnel that would cut through Miramar Hill. This alternative

would include a new underground station at the University Towne Centre (UTC). The second alternative would be via a tunnel underneath I-5 and would not include a station.

- **#21a – Del Mar Tunnel, Camino Del Mar:** Construct a tunnel and second main track beneath Camino Del Mar from MP 243.6 to MP 245.5. This project is an alternative to Project #21b. It is in the planning stages and not recommended for near- to long-term implementation.
- **#21b – Del Mar Tunnel, I-5/Peñasquitos:** Construct a tunnel and second main track beneath I-5, bypassing Peñasquitos Lagoon and surfacing south of San Dieguito Lagoon. This project is an alternative to Project #21a. It is in the planning stages and not recommended for near- to long-term implementation.
- **#26a – UTC Tunnel, UTC Alignment:** Construct a tunnel through Miramar Hill with an underground stop at University Town Center. This project is an alternative to Project #26b. It is not recommended for near- to long-term implementation.
- **#26b – UTC Tunnel, I-5 Alignment:** Construct a tunnel through Miramar Hill beneath Interstate 5. This project is an alternative to Project #26a. It is not recommended for near- to long-term implementation.

4.2 I-5 CORRIDOR

The proposed I-5 NCC project would widen the existing I-5 freeway to provide two managed or high occupancy vehicle (HOV) lanes and, potentially, an additional general-purpose (GP) lane in each direction. The project would begin at La Jolla Village Drive in San Diego and extend northward approximately 43 km (27 miles) to Harbor Drive in Oceanside. The Build Alternatives currently under consideration are shown in Figure 4-2 and Figure 4-3:

- **No Build –** Includes ongoing operations and maintenance and separate projects in the corridor.
- **10+4 with Buffer –** Ten GP lanes with four HOV/Managed Lanes in the median separated from the GP lanes with a painted-stripe buffer.
- **10+4 with Barrier –** Same as 10+4 with buffer but with a concrete barrier instead of painted buffer.
- **8+4 with Buffer –** Eight GP lanes with four HOV/Managed Lanes in the median separated from the GP lanes with a painted stripe buffer.
- **8+4 with Barrier –** Same as 8+4 with Buffer but with a concrete barrier instead of painted buffer.

Under all Build Alternatives, two median HOV/Managed Lanes would be added between La Jolla Village Drive and the I-5/I-805 merge. From this merge to Manchester Avenue, two median HOV/Managed Lanes would be added (two currently exist in the segment so the total would be four) and up to two GP lanes. Between Manchester Avenue and SR-78, four HOV/Managed Lanes and up to two GP lanes would be added. North to Harbor Drive, four HOV/Managed Lanes would be added. The number of auxiliary lanes included varies by alternative and segment. Project elements are discussed in the following sections.

FIGURE 4-2: TYPICAL CROSS SECTIONS FOR 10+4 WITH BARRIER AND BUFFER ALTERNATIVES

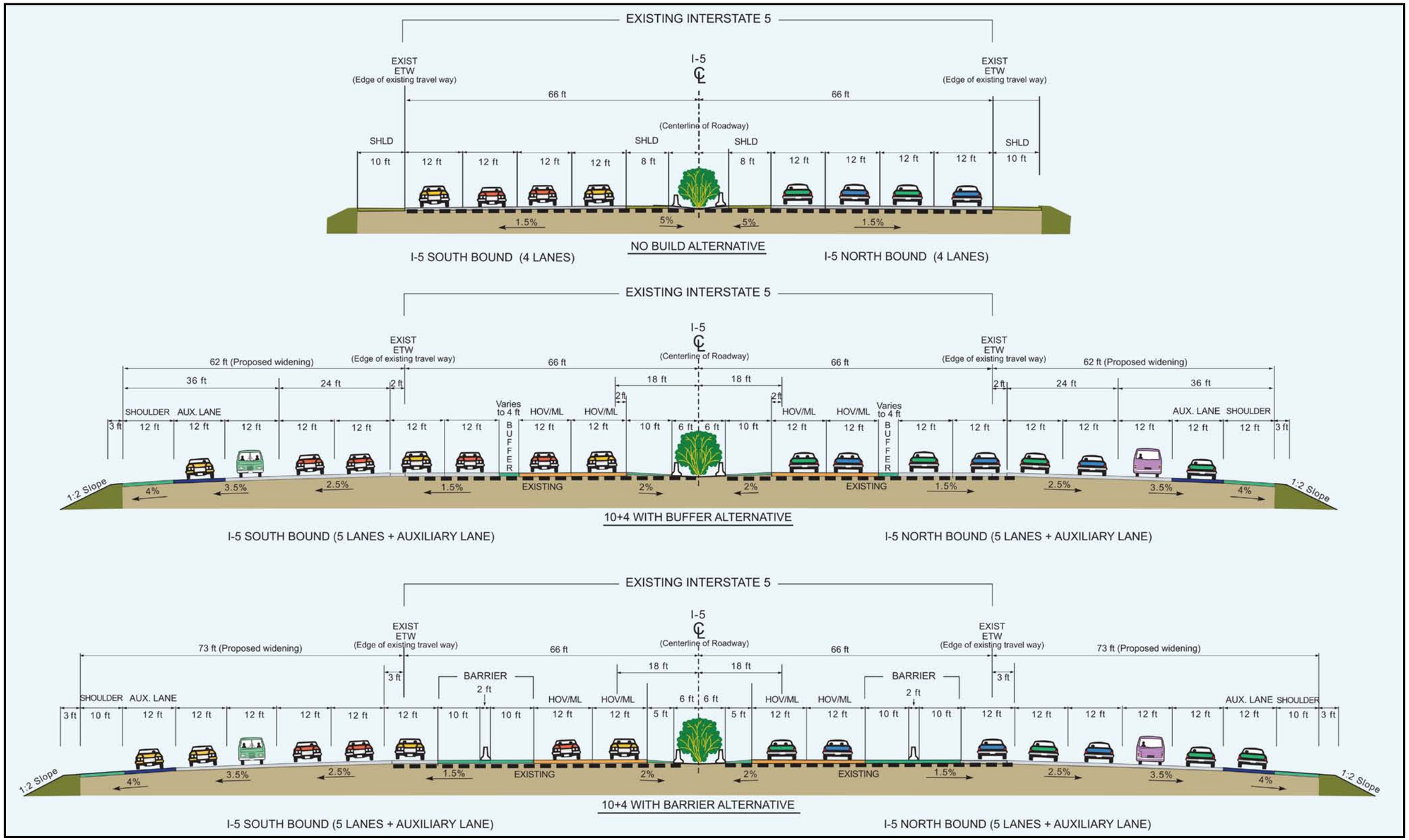

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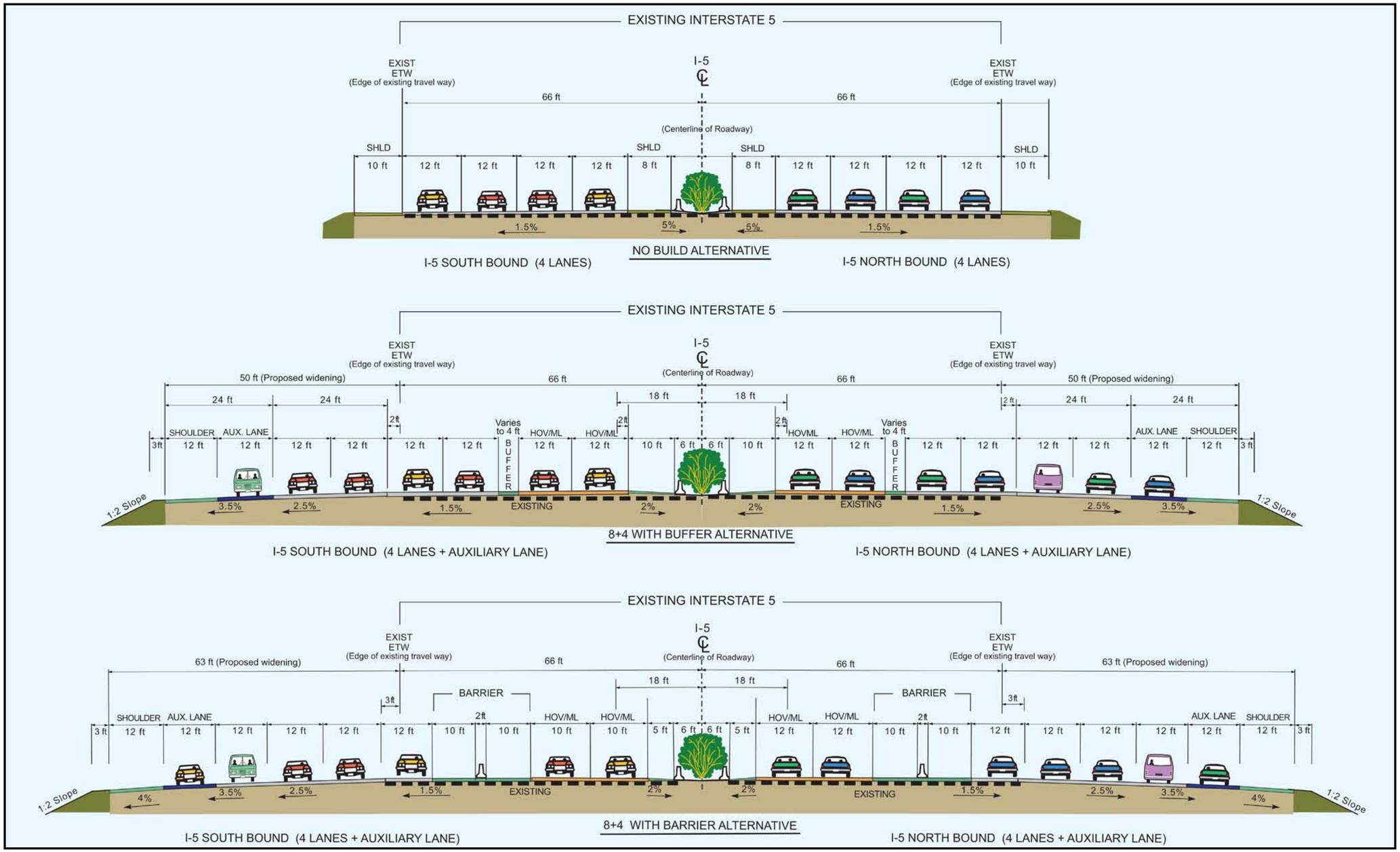
FIGURE 4-3: TYPICAL CROSS SECTIONS FOR 8+4 WITH BARRIER AND BUFFER ALTERNATIVES



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The No Build Alternative evaluates the effects of not implementing the I-5 NCC project. It evaluates the existing conditions as well as other projects are reasonably expected to occur independently of the I-5 NCC project and will be analyzed by separate environmental documents. All build alternatives also assume the implementation of these projects. These projects are the following:

- LOSSAN Rail Improvements (double tracking of rail corridor between Los Angeles–San Diego–San Luis Obispo)
- I-5/Genesee Avenue Interchange Improvements
- I-5/SR-56 Interchange Improvements
- I-5/SR-78 Interchange Improvements
- I-5 “Mid-Coast” Freeway Improvements (10+2 HOV facility from I-8 to I-805)
- I-805 “North” improvements (8+4 HOV/Managed Lanes facility from SR-52 to north of Mira Mesa Boulevard in San Diego)
- Sorrento Valley Road/Roselle Street Improvements
- Manchester Avenue Interchange Improvements
- Encinitas Boulevard Interchange Improvements
- Birmingham Drive to Leucadia Boulevard Auxiliary Lanes
- I-805 northbound direct access ramps (DARs) at Carroll Canyon Road and HOV lanes between Carroll Canyon Road and the I-5/I-805 junction.

4.2.1 Managed Lanes

Managed Lanes enable the more efficient use of highway lanes and reduced travel times for the users of those lanes. Conditions in managed lanes can be controlled through real-time monitoring and traffic operations adjustments in order to achieve free-flow speeds and reliable travel times. Managed lanes operate as HOV lanes with transit vehicles, carpools and other HOVs traveling at free flow. Any additional capacity in the lanes, while still ensuring they are freely moving, can be used by single occupancy vehicles paying a fee. The fee varies in order to keep travel times reliable. A higher premium is therefore paid to use the uncongested managed lanes when the GP lanes are congested. Revenue from the lanes is invested in corridor transportation, specifically HOV facilities and transit service and operations. In the future as needs, priorities and demand changes, the facility is operationally flexible to adjust through changes to pricing, vehicle eligibility, and access control. Future transit service, including corridor bus rapid transit (BRT) service, has prioritized infrastructure to operate on. Additionally, managed lanes allow for a large investment in HOV and transit capacity to be smoothed by providing managed access to SOVs. As HOV use grows, the percentage of SOV using the lanes will decrease. The managed lanes create a facility that focuses on moving people, not vehicles through the corridor. Managed lanes provide reliability to transit users, carpoolers and others who need reliability in their trips.

Managed lanes would be separated from the GP lanes by either a buffer or a barrier. A concrete barrier would require standard (3.0 m [10 feet]) shoulders on each side of it and would, therefore, increase the overall footprint more than a buffer, which would be done with striping (1.2 m, 4 feet). Access and egress points would be limited to 4 DARs and 15 ingress/egress areas. The DARs allow direct access into the managed lanes from overcrossings at or near Voigt Drive (San Diego), Manchester Avenue (Encinitas), Cannon Road (Carlsbad), and Oceanside Boulevard (Oceanside). The Manchester Avenue DAR would also feed into a park and ride and a BRT station. DARs reduce congestion and improve reliability because they provide a dedicated access route for managed lanes users and do not require drivers to weave through multiple GP lanes to reach the DARs.

DAR locations were determined to best serve corridor travel needs. The locations provide direct access to the corridor's major activity centers, transit centers, origins, and destinations and while ensuring they are appropriately spaced (4–5 miles). DAR locations and the activity centers they will provide links to are outlined in Table 4-2. Also, some locations, such as at Manchester Avenue, are located where parallel arterials end and therefore are major access and egress points for I-5.

TABLE 4-2: DIRECT ACCESS RAMPS AS LINKS TO ACTIVITY CENTERS

Direct Access Ramps Locations	Activity Center
Voigt Drive – San Diego	UCSD, Hospitals, Employment Center, Shopping, Hotels, Future Transit Hub
Manchester Avenue – Encinitas	Public Beach, Future Transit Hub, Community College, Town Centers
Cannon Road – Carlsbad	Employment Center, LEGOLAND®, Regional Retail, Airport, Public Beach
Oceanside Boulevard – Oceanside	Town Center, Regional Retail, Public Beaches, Transit Center

Source: I-5 NCC Project Draft EIR/EIS (Section 2-2).

Additionally, managed-lane users could access the lanes at specific access and egress points. Currently charged tolls would be posted and those who wanted to use the managed lanes could merge into the facility from the GP lanes. Fees for SOVs will be charged at access/egress points when the vehicles pass under overhead suspended scanners. In addition to suspended scanners, access points would have electronic signs displaying the current toll of various segments in the corridor. Access and egress locations are shown in Table 4-3.

TABLE 4-3: MANAGED LANE INGRESS/EGRESS AND DIRECT ACCESS RAMPS LOCATIONS

	Northbound Ingress/Egress	Southbound Ingress/Egress
La Jolla Village Drive	X	X
Voigt Drive DAR	X	X
Carmel Valley Road	X	X
Lomas Santa Fe Drive	X	X
Manchester Avenue DAR	X	X
Birmingham Drive	X	X
Poinsettia Lane	X	X
Cannon Road DAR	X	X
Tamarack Drive		X
SR-78	X	X
Oceanside Boulevard DAR	X	X
Harbor Drive	X	X

Source: I-5 NCC Project Draft EIR/EIS (Section 2-2).

Violations in the HOV/Managed lanes law would be enforced by California Highway Patrol (CHP) based on an agreement with SANDAG similar to existing operations on the I-15 Express Lanes project. This would include a combination of routine and special enforcement to ensure only HOV and vehicles with valid transponders are using the lanes.

While the buffer separation between the managed and GP lanes would result in a reduced footprint, a barrier separation would have the following operational advantages:

- Relatively unimpeded flow in the managed lanes without interference from GP lanes
- Easier law enforcement
- Incident management

- Reduced managed lane violations
- Increased driver comfort
- The possible use of Automated Highway Systems

4.2.2 Bus Rapid Transit (BRT)

A BRT route will use the new managed lane facility. BRT combines stations, enhanced vehicles, Intelligent Transportation Systems (ITS), and priority running ways into a premier rubber-tire transit alternative with fast, frequent, and high-quality service. Route 472 will connect University Town Center (UTC), at the south end of the NCC, to northeast Oceanside, at the north end of the NCC, via the I-5 managed lanes and El Camino Real. This route will use the I-5 Managed Lanes from Voigt Drive in UTC to the Manchester DAR to avoid congestion and ensure a fast, reliable travel time. The route would leave the highway at Manchester where a new transit station would be located adjacent to the DAR. The route would continue along El Camino Real utilizing transit priority measures and providing high quality transit service to a currently underserved area. Buses are planned to run at 10-minute intervals throughout the day by 2030. Although none have been planned yet, other BRT or traditional bus routes could use the managed lanes and reap the same travel time and reliability benefits.

4.2.3 Auxiliary Lanes

Auxiliary lanes are lanes on the outside of the freeway that connect on-/off-ramps and allow for acceleration, deceleration, and merging. These lanes maximize the capacity of a facility by reducing congestion caused by weaving and variable travel speeds. In the NCC, where access to local streets from I-5 (ramp volume) is high due to local trips using the freeway, the distances between interchanges is short, and freeway volumes are high, merging movements create greater levels of congestion. Auxiliary lanes improve the efficiency of the highway facility by moving disruptive merging out of the main travel lanes.

I-5 currently has, and will retain under all alternatives, auxiliary lanes in the following segments:

- Sorrento Valley Road to Carmel Valley Road
- Via de la Valle to Lomas Santa Fe
- Palomar Airport Road to Cannon Road
- Southbound Mission Avenue to SR 76
- SR 76 to Harbor Drive

New auxiliary lanes are proposed for the following segments:[4]

- La Jolla Village Drive to Genesee Avenue
- Carmel Valley Road to Del Mar Heights Road (NB Only)
- Lomas Santa Fe to Manchester Avenue (NB Only)
- Manchester Avenue to Birmingham Drive
- Birmingham Drive to Santa Fe Drive
- Santa Fe Drive to Encinitas Boulevard (SB Only)
- Encinitas Boulevard to Leucadia Boulevard (NB Only)
- Palomar Airport Road to Cannon Road (SB Only)
- Cannon Road to Tamarack Avenue

[4] *I-5 NCC Project Draft EIR/EIS* (Section 2-2), June 2010.

- Cassidy Street to Oceanside Boulevard (SB Only)
- California Street to Oceanside Boulevard (SB Only)
- Oceanside Boulevard to Mission Avenue
- Mission Avenue to SR 76 (NB Only)
- SR-76 to Harbor Drive (extension SB only)

4.2.4 General-Purpose Lanes

General-purpose (GP) lanes are the standard lanes of a freeway where most travel occurs. There is no priority given to any specific modes. Generally, operations of these lanes do not change based on time of day or congestion. Two new GP lanes, one in each direction, are included in the 10+4 barrier and buffer alternatives. The new lanes would extend the length of the project area from La Jolla Village Drive in San Diego to SR-78 in Oceanside. No new GP lanes are included in the 8+4 alternatives. Adding GP lanes would reduce congestion for all users.

4.2.5 Ramp and Interchange Improvements

In order to accommodate widening, local interchange ramps will undergo modifications. While the basic configuration will generally remain, the number of lanes and alignment will be modified to ensure that they accommodate expected traffic volumes and conform to current design standards. At some interchanges, ramps will be modified to address expected increases in local traffic and resulting accessibility needs. Most ramps would have HOV bypass lanes. Interchange improvements are shown in Table 4-4 and Table 4-5.

4.2.6 Intelligent Transportation System (ITS) Features

The corridor already has ITS elements in place that will be supplemented by further improvements as part of the Transportation Managements System (TMS) improvement plan for the corridor and region. These elements manage congestion using historical data, real-time information, and control and advanced communication networks to provide information about system operations to users and operators so they can make informed travel decisions. Additionally, ITS features improve the efficiency of existing infrastructure and reduce the need for major capacity increasing projects. Within the corridor, multiple ITS components are planned, including:

- Twenty-seven miles of new fiber optic cable – Relaying real-time traffic information to highway operators and to signage along the corridor
- Five new changeable message signs – Conveying information to motorists, including traffic conditions, alternate routes, special event, or traffic incident information. For managed lanes, these signs would display tolls
- Between 15 and 20 new closed circuit television cameras – Providing visual analysis of the freeway and congestion and security surveillance
- Two new highway advisory radio channels – Providing drivers with real time information about highway conditions to allow for educated travel decisions
- New vehicle detection systems at five locations (nine total) – Detection devices provide traffic managers real time information about how the freeway is operating
- Arterial interconnect signals on El Camino Real – Maximizing the capacity of an existing facility
- Ramp meters at 15 locations – Creating consistent and even flow – and a coordinated corridor-wide ramp metering system
- Arterial signal timing enhancements

TABLE 4-4: INTERCHANGE RAMP-LANE IMPROVEMENTS

Interchange	Location	Existing Number of Lanes			I-5 NCC Project Number of Lanes		
		SOV	HOV	TOTAL	SOV	HOV	TOTAL
Genesee Avenue	Genesee Avenue to SB I-5	1	0	1	2	1	3
	Genesee Avenue to NB I-5	1	0	1	2	0	2
Roselle Street	Roselle Street to SB I-5	1	0	1	2	1	3
Del Mar Heights Road	EB Del Mar Heights Road to SB I-5	1	1	2	2	1	3
	WB Del Mar Heights Road to SB I-5	2	0	2	2	1	3
	Del Mar Heights Road to NB I-5	2	0	2	2	1	3
Via de la Valle	WB Via de la Valle to SB I-5	2	0	2	1	1	2
	EB Via de la Valle to SB I-5	1	1	2	2	1	3
	EB Via de la Valle to NB I-5	2	0	2	1	1	2
Birmingham Drive	Birmingham Drive to SB I-5	2	0	2	2	1	3
	Birmingham Drive to NB I-5	1	0	1	2	1	3
Santa Fe Drive	Santa Fe Drive to SB I-5	1	1	2	2	1	3
	Santa Fe Drive to NB I-5	1	0	1	2	1	3
Encinitas Boulevard	Encinitas Boulevard to SB I-5	1	1	2	2	1	3
	Encinitas Boulevard to NB I-5	2	0	2	2	1	3
Leucadia Boulevard	Leucadia Boulevard to NB I-5	1	1	2	2	1	3
La Costa Avenue	La Costa Avenue to NB I-5	1	1	2	2	1	3
Palomar Airport Road	EB Palomar Airport Road to SB I-5	1	1	2	1	1	2
Tamarack Avenue	Tamarack Avenue to NB I-5	1	0	1	2	0	2
Carlsbad Village Drive	Carlsbad Boulevard to SB I-5	1	0	1	1	1	2
	Carlsbad Boulevard to NB I-5	1	0	1	1	1	2
Oceanside Boulevard	Oceanside Boulevard to SB I-5	2	0	2	2	1	3
Mission Avenue	EB Mission Avenue to SB I-5	1	1	2	2	1	3
	Mission Avenue to NB I-5	1	0	1	2	0	2
SR 76	SR 76 to SB I-5	2	0	2	2	1	3
	SR 76 to NB I-5	2	0	2	2	1	3
Harbor Drive	Harbor Drive to SB I-5	1	0	1	2	1	3
	Harbor Drive to NB I-5	1	0	1	2	0	2

Source: I-5 NCC Project Draft EIR/EIS (Section 2-2), June 2010.

TABLE 4-5: INTERCHANGE LANE GEOMETRY IMPROVEMENTS

Interchange	Location	Lane Geometry Modifications
Del Mar Heights Road	I-5 SB Ramps	Ramp adjustments to remove free right turn capabilities
	I-5 NB Ramps	Convert NB left/through/right lane to a shared through right-turn lane, add a second left-turn lane (creating dual right and dual lefts)
Via de la Valle	I-5 SB Ramps	Ramp adjustments to remove free right-turn capabilities
	I-5 NB Ramps	Ramp adjustments to remove free right-turn capabilities
Manchester Avenue	I-5 SB Ramps	Ramp adjustments to remove free right-turn capabilities
Encinitas Boulevard	I-5 SB Ramps	Addition of an exclusive SB left-turn lane (creating dual left-turn lanes)
		Addition of an exclusive SB left-turn lane (creating dual right-turn lanes)
Palomar Airport Road	I-5 SB Ramps	Ramp adjustments to remove free right-turn capabilities, addition of a WB right-turn lane (creating dual right-turn lanes)
Tamarack Drive	I-5 SB Ramps	Addition of a WB left-turn lane (creating dual lefts)
	I-5 NB Ramps	Addition of a right-turn lane (creating dual right-turn lanes)
Carlsbad Village Drive	I-5 SB Ramps	Convert the SB shared left/through/right lane to a shared right/though lane, add an exclusive SB left-turn lane (creating a single left-turn lane and dual right-turn lanes).
	I-5 NB Ramps	Separate NB left-turn lane, convert right-turn lane to a shared left/through/right lane
Oceanside Boulevard	I-5 SB Ramps	Convert SB through/right turn-lane into two separate lanes
Mission Avenue	I-5 SB Ramps	Remove EB to SB on-ramp, add dual EB left-turn lanes, convert SB through/left to an exclusive left-turn lane (creating dual lefts), convert the exclusive southbound right-turn lane to a shared through right-turn lane
	I-5 NB Ramps	Remove NB to EB free right-turn lane, add a second EB left-turn lane (creating dual lefts), add SB dual left-turn lanes
SR 76	I-5 NB Ramps	Ramp adjustments to remove free right-turn capabilities, addition of a second NB left-turn lane (creating dual lefts)
Harbor Drive	I-5 SB Ramps	Ramp adjustments to remove free right-turn capabilities
		Convert outside WB through lane into an exclusive right-turn lane
		Convert inside WB through lane into a shared through/right-turn lane
	I-5 NB On-Ramps	Re-alignment of NB to WB off-ramp to align with San Rafael intersection (EB right turn will be controlled by signal and will no longer be a free right turn)
		Convert NB shared through/right-turn lane into an exclusive through lane, eliminating the NB right-turn movement and improving pedestrian safety

Source: I-5 NCC Project Draft EIR/EIS (Section 2-2), June 2010.

4.2.7 Sound Walls, Retaining Walls, and Other Elements

Where feasible and reasonable, sound walls, or other forms of noise abatement, will be used based on the Caltrans Noise Protocol. Noise walls may be recommended for the segments detailed in Table 4-6.

TABLE 4-6: SUMMARY OF RECOMMENDED CORRIDOR SOUNDWALLS

Location	Approx. Length (ft)	Max Height (ft)	Direction
Carmel Mountain Rd	1,401	12	NB (East)
I-5/SR-56 Interchange	262	14	SB (West)
Del Mar Heights Rd	3,615	14	SB (West)
Del Mar Heights Rd	889	10	SB (West)
Del Mar Heights Rd	459	8	SB (West)
Via De La Valle	3,439	12	SB (West)
Lomas Santa Fe	393	16	NB (East)
Lomas Santa Fe	499	10	NB (East)
Manchester Ave	915	14	NB (East)
Manchester Ave	758	12	SB (West)
Manchester Ave	837	12	SB (West)
Manchester Ave	322	14	SB (West)
Birmingham Dr	348	16	NB (East)
Birmingham Dr	594	10	NB (East)
Birmingham Dr	709	10	SB (West)
Birmingham Dr	407	8	NB (East)
Santa Fe Dr	187	10	NB (East)
Santa Fe Dr	2,136	12	NB (East)
Requeza St	860	14	SB (West)
Requeza St	1,430	10	SB (West)
Encinitas Blvd	1,263	14	NB (East)
Encinitas Blvd	2,178	16	NB (East)
Encinitas Blvd	361	8	NB (East)
Encinitas Blvd	443	16	NB (East)
Leucadia Blvd	4,225	16	SB (West)
Leucadia Blvd	1,778	14	NB (East)
La Costa Ave	5,463	16	SB (West)
La Costa Ave	705	8	SB (West)
Batiquitos Lagoon Bridge	604	12	SB (West)
Poinsettia Lane	364	12	NB (East)
Poinsettia Lane	4,793	16	NB (East)
Tamarack Ave	656	16	NB (East)
Tamarack Ave	1,389	10	SB (West)
Tamarack Ave	733	10	SB (West)
Tamarack Ave	545	8	NB (East)
Tamarack Ave	3,838	16	NB (East)
Tamarack Ave	3,937	10	SB (West)
Carlsbad Village Dr	2,083	14	SB (West)
Carlsbad Village Dr	2,178	16	NB (East)
Las Flores Dr	433	10	NB (East)
Las Flores Dr	584	16	SB (West)
SR-78/I-5 Sep	1,470	12	SB (West)
Cassidy St	695	14	NB (East)
Cassidy St	2,213	14	SB (West)
California St	1,264	8	SB (West)

TABLE 4-6: SUMMARY OF RECOMMENDED CORRIDOR SOUNDWALLS (CONTINUED)

Location	Approx. Length (ft)	Max Height (ft)	Direction
California St	1,494	12	NB (East)
Loma Alta Creek Bridge	1,289	14	SB (West)
Brooks St	814	12	SB (West)
Brooks St	845	14	NB (East)
Mission Ave	731	16	NB (East)
Bush St	1,755	10	SB (West)
Harbor Dr	596	12	NB (East)
Harbor Dr	730	12	NB (East)

Source: I-5 NCC Project Draft EIR/EIS (Section 3-15), June 2010.

Numerous retaining walls have been proposed along the I-5 alignment. In general, Caltrans' standard retaining walls (Type 1 through Type 5) or crib walls may be used without special design. Non-standard retaining walls may be utilized in suitable locations, but will require additional support work and design during the project design phase. Noise and retaining walls will not be located in places that block lagoon or ocean views.

Design for safety devices, guard rails, end treatments, crash cushions, bridge rails, signs, and drainage improvements will all be designed consistent with Caltrans best practices and applicable mandatory design standards.

4.2.8 Structure Rehabilitation and Upgrading

In order to accommodate widening, most corridor overcrossings will need to be replaced (Table 4-7) and most undercrossings will need to be widened (Table 4-8). This includes the replacement of some lagoon bridges and the lengthening of the I-5 bridge crossing San Elijo Lagoon. Structure rehabilitation and upgrading presents the opportunity to upgrade and reconfigure local interchanges to improve pedestrian and bicycle circulation. This is outlined in Section 4.4.1.

4.3 OTHER TRANSPORTATION ENHANCEMENTS

In order to fully understand and analyze the program of improvements in the NCC, the TREP/PWP includes other transportation enhancements planned for the corridor. Inclusion of these projects provides a comprehensive understanding of the mobility and resource benefits and impacts planned for the corridor. Each of these additional projects will be analyzed through separate environmental processes and are not addressed in the LOSSAN or I-5 environmental documents discussed in Sections 4.1 or 4.2, respectively. These enhancements are included in Figure 4-4A through Figure 4-4G: Planned Improvements.

4.3.1 I-5/SR-56 Interchange

The Interstate 5/State Route 56 Interchange Project proposes to improve the traffic operations on I-5 between Del Mar Heights Road and Carmel Valley Road, and on SR-56 between I-5 and Carmel Country Road. Local streets and the surrounding communities experience increased demand and congestion during peak hours from I-5 and SR 56 traffic. Currently, drivers must exit the freeway to travel between southbound I-5 to eastbound SR-56 and westbound SR-56 to northbound I-5. This causes congestion at the El Camino Real and Carmel Valley Road intersection. Drivers use alternative routes, including El Camino Real, Carmel Valley Road, and Carmel Creek Road, which causes additional congestion on surface streets and through neighborhoods.

TABLE 4-7: I-5 OVERCROSSING AND LAGOON BRIDGE REPLACEMENTS BY ALTERNATIVE

	10+4 Barrier Alternative	10+4 Buffer Alternative	8+4 Barrier Alternative	8+4 Buffer Alternative
La Jolla Village Drive OC	Yes	Yes	Yes	Yes
Genesee Ave	Replaced by others to not preclude I-5 NCC Project Alternatives			
Del Mar Heights Rd. OC	No	No	No	No
Birmingham Dr. OC	Yes	Yes	Yes	Yes
Mackinnon Ave. OC	Yes	Yes	Yes	Yes
Requeza St. OC	Yes	Yes	Yes	Yes
Leucadia Blvd. OC	Yes	Yes	Yes	Yes
La Costa Ave. OC	Yes	Yes	Yes	No
Batiquitos Lagoon	Yes	Yes	Yes	Yes
Poinsettia Lane OC	Yes	Yes	Yes	Yes
Palomar Airport Rd. OC	Yes	No	No	No
Aqua Hedionda	Yes	Yes	Yes	Yes
Chinquapin Ave. OC	Yes	Yes	Yes	Yes
Tamarack Ave. OC	Yes	Yes	Yes	No
Las Flores Dr. OC	Yes	Yes	Yes	No
Jefferson St.	Yes	Yes	Yes	Yes
Buena Vista Creek	Yes	Yes	Yes	Yes
SR-78/I-5 Separation	Yes	Yes	Yes	Yes
Cassidy St. OC	Yes	Yes	Yes	Yes
California St. OC	Yes	Yes	Yes	Yes
Brooks St. OC	Yes	Yes	Yes	Yes
Mission Ave. OC	Yes	Yes	Yes	Yes
Fourth St/Bush St. OC	Yes	Yes	Yes	Yes
Neptune Way/8th St. OC	Yes	Yes	Yes	Yes

Source: I-5 NCC Project Draft EIR/EIS (Section 2-2), June 2010.

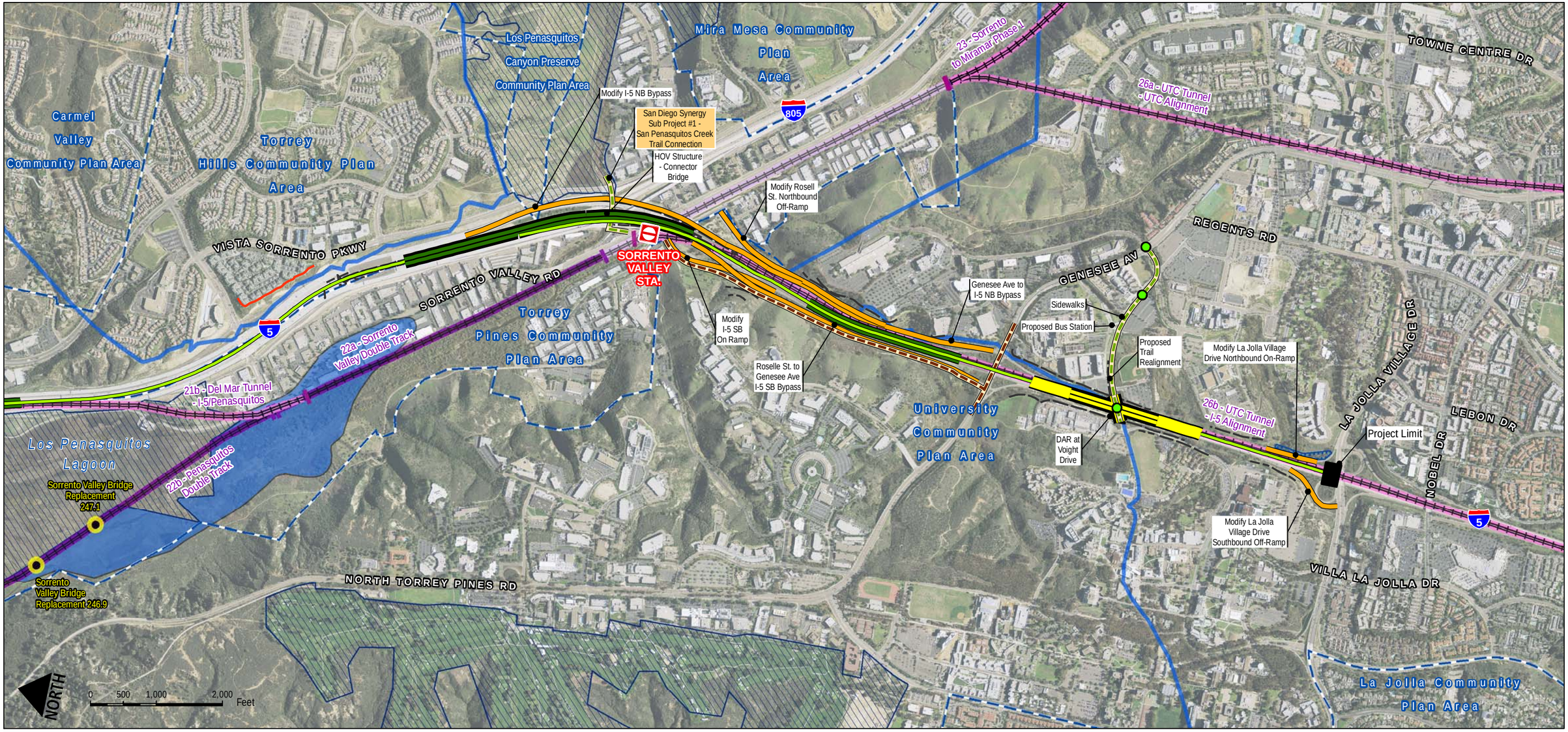
OC-Overcrossing

TABLE 4-8: I-5 UNDERCROSSING WIDENING BY ALTERNATIVE

	10+4 Barrier Alternative	10+4 Buffer Alternative	8+4 Barrier Alternative	8+4 Buffer Alternative
I-805 Sorrento Valley	Yes (MED, SB)	Yes (MED, SB)	Yes (MED, SB)	Yes (MED, SB)
Carmel Valley Creek	Yes (SB)	Yes (SB)	Yes (SB)	Yes (SB)
Carmel Valley Road	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
San Dieguito River	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Via De La Valle UC	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Lomas Santa Fe UC	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Manchester Ave. UC	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)
Santa Fe Dr. UC	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)
Encinitas Blvd. UC	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)
Cannon Rd. UC	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Chestnut Ave. UC	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Carlsbad Village Dr. UC	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Loma Alta Creek	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
Oceanside Blvd. OH	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)	Yes (NB,SB)
I-5/SR-76 Separator	Yes (NB, MED)	Yes (NB, MED)	Yes (NB, MED)	Yes (NB, MED)
San Luis Rey River	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)	Yes (NB, MED, SB)
Harbor Drive/ Camp Pendleton UC	Yes (NB, MED)	Yes (NB, MED)	Yes (NB, MED)	Yes (NB, MED)

Source: I-5 NCC Project Draft EIR/EIS (Section 2-2), June 2010.

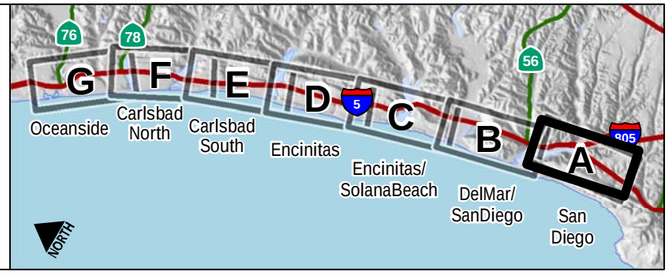
UC-Undercrossing MED-Median widening (inside widening) NB – Northbound (outside widening) SB – Southbound (outside widening)



LOSSAN Proposed Projects
- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track

Caltrans Proposed Projects
I-5 NCC 10 + 4 with Barrier Alternative
- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

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



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

FIGURE 4-4A

Planned Improvements (City of San Diego)

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

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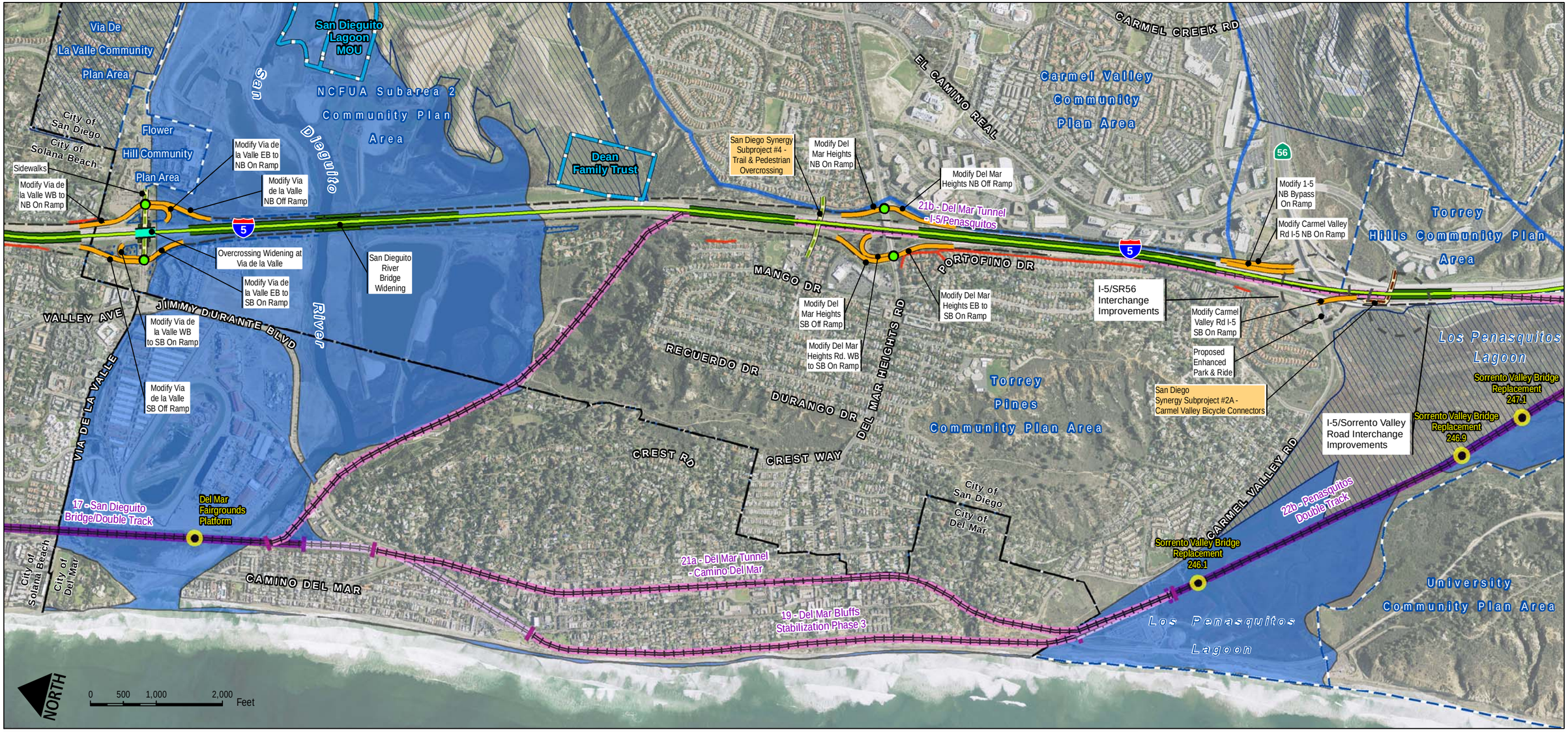
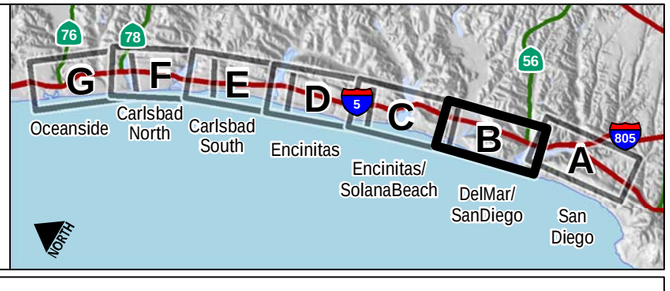


LOSSAN Proposed Projects
- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track
- Resource Mitigation Site

Caltrans Proposed Projects
I-5 NCC 10 + 4 with Barrier Alternative
- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

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



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

FIGURE 4-4B

Planned Improvements (City of Del Mar / San Diego)

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

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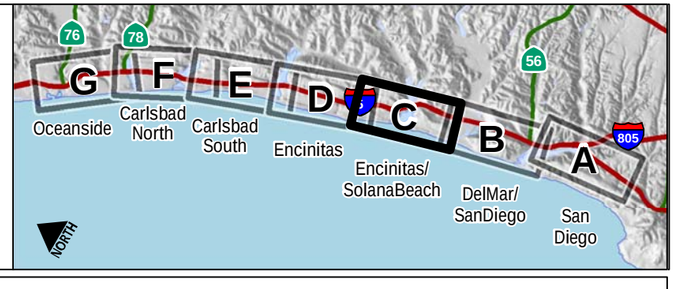
LOSSAN Proposed Projects
- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track

Caltrans Proposed Projects
I-5 NCC 10 + 4 with Barrier Alternative
- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

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



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

FIGURE 4-4C

Planned Improvements (City of Encinitas [South] / Solana Beach)

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

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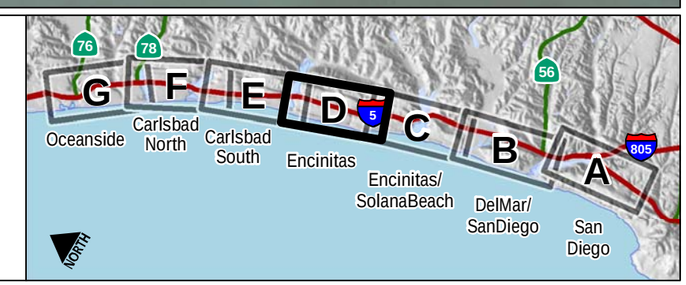
LOSSAN Proposed Projects
- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track
- Resource Mitigation Site

Caltrans Proposed Projects
I-5 NCC 10 + 4 with Barrier Alternative
- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

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



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

FIGURE 4-4D

Planned Improvements (City of Encinitas [North])

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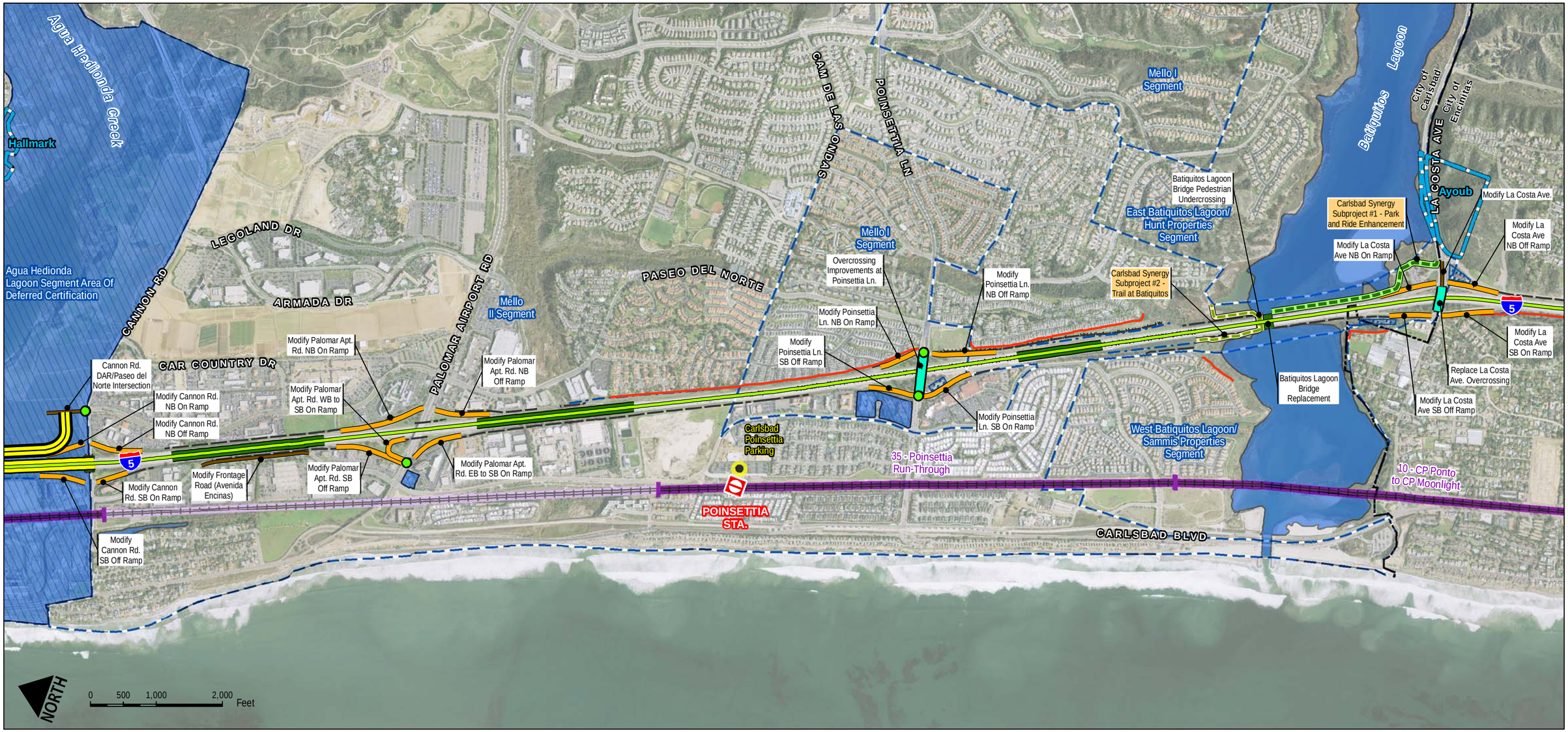
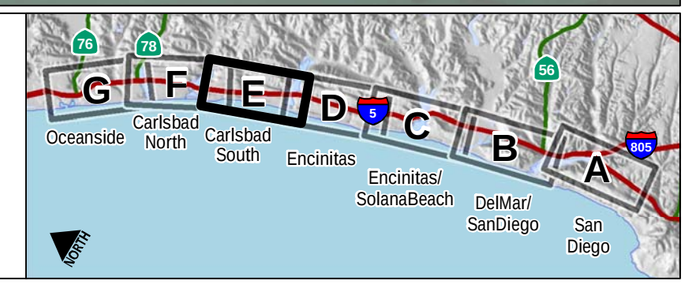


LOSSAN Proposed Projects
- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track
- Resource Mitigation Site

Caltrans Proposed Projects
I-5 NCC 10 + 4 with Barrier Alternative
- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

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



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

FIGURE 4-4E

Planned Improvements (City of Carlsbad [South])

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

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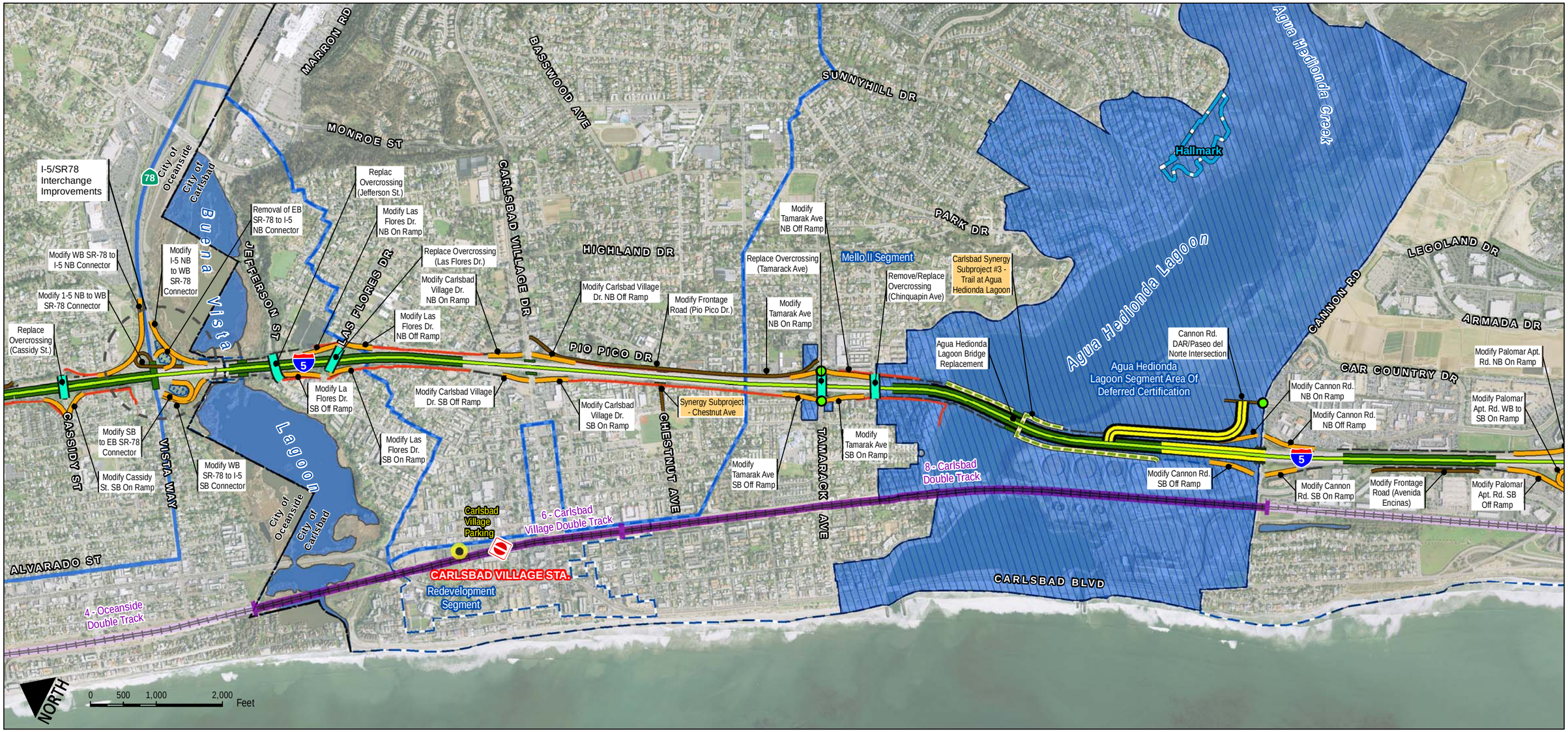
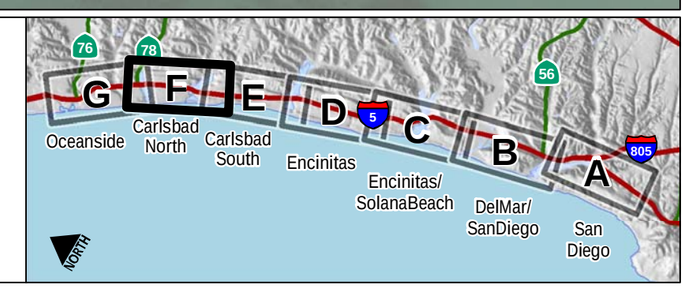


LOSSAN Proposed Projects
- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track
- Resource Mitigation Site

Caltrans Proposed Projects
I-5 NCC 10 + 4 with Barrier Alternative
- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

Coastal Zone Permit Areas
- Coastal Commission Permit Jursidiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary



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

FIGURE 4-4F

Planned Improvements (City of Carlsbad [North])

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LOSSAN Proposed Projects

- LOSSAN Non-Track Projects
- Station
- LOSSAN Track Capacity Project
- LOSSAN Track Capacity Project Option
- LOSSAN Track

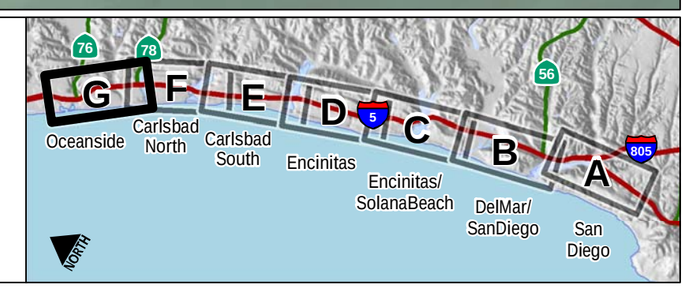
Caltrans Proposed Projects

I-5 NCC 10 + 4 with Barrier Alternative

- HOV/Managed Lanes
- HOV Structure
- DAR Lanes
- Direct Access Ramp (DAR)
- Auxillary Lanes
- Bypass/Ramp Improvements
- Overcrossing Improvements
- Other Road Improvements
- Retaining Wall/Concrete Barrier
- Sound Wall
- Bike Facility Improvements
- Trail/Park/Sidewalk Pedestrian Improvements
- Community Enhancement Feature
- Bioswale
- Detention Basin
- Traffic Signal/Intersection Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Coastal Zone Boundary



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

FIGURE 4-4G

Planned Improvements (City of Oceanside)

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

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Project alternatives include improvements to local streets, adding auxiliary lanes along I-5 and SR-56, interchange improvements, or southbound-to-eastbound and westbound-to-northbound freeway connector ramps. An environmental document analyzing the alternatives is planned for release in 2010. Five alternatives have been selected for consideration:

- **No Build Alternative** – Assumes the existing configuration for the I-5/SR 56 interchange with the improvements proposed as part of the I-5 NCC Project.
- **Direct Connector Alternative** – Proposes constructing direct freeway-to-freeway connectors in the west to north and south to east directions. Each connector ramp would have two GP lanes. Additionally, this alternative includes extending the local bypass in both the northbound and southbound directions to the Del Mar Heights Road interchange, auxiliary lanes, improvements to ramps, reconstructing the Del Mar Heights Road overcrossing, widening the El Camino Real undercrossing, and other associated operational improvements.
- **Auxiliary Lane Alternative** – Proposes the constructing an auxiliary lane along southbound I-5, improvements to the southbound off-ramp and northbound on-ramp at Carmel Valley Road, and improvements to the eastbound El Camino Real on-ramp. Carmel Valley Road would be widened to four lanes east of I-5 and improvements would be made to the intersection of El Camino Real and Carmel Valley Road south of SR 56. Also included would be additional auxiliary lanes along SR 56, reconstructing the Del Mar Heights Road overcrossing, and other associated operational improvements.
- **Hybrid Alternative** – The proposed westbound to northbound configuration from Carmel Country Road to Del Mar Heights Road featured in the Direct Connector Alternative would be combined with the proposed southbound to eastbound improvements featured in the Auxiliary Lane Alternative.
- **Hybrid with Flyover Alternative** – Includes a proposed flyover structure that would connect eastbound Carmel Valley Road to the eastbound SR 56 fast lane, in addition to the west SR 56 to north I-5 connector featured as part of the Direct Connector Alternative. This alternative would require non-standard lane and shoulder widths along Carmel Valley Road and tunneling behind the Carmel Valley Road undercrossing abutments to provide pedestrian/bicycle access.

4.3.2 I-5/SR 78 Interchange

The I-5/SR-78 interchange project is proposed to address existing congestion at the I-5/SR-78 interchange. Four alternatives are under consideration, ranging from No Build to an interchange with direct freeway-to-freeway connectors and DARs.

Currently, vehicles traveling from westbound SR 78 to southbound I-5 must turn left through a controlled intersection in order to access the I-5 entrance ramp. This movement is delayed during peak hours and causes congestion on westbound SR 78. Similarly, vehicles traveling from southbound I-5 to eastbound SR-78 exit onto the Vista Way exit ramp and turn right through a controlled intersection to enter SR-78. Vehicles queue on the exit ramp and experience delays during peak hours. Additionally, this queue extends onto I-5 contributing to congestion. Freeway-to-freeway connectors at this location are included in the region's Transportation Plan. Currently, a traffic study is underway to determine the impact of the project on local streets.

4.3.3 Sorrento Valley Road/Roselle Street/I-5

The Sorrento Valley Road/Roselle Street/I-5 Interchange experiences heavy congestion during commute times. This project proposes improving the interchange with I-5 at Sorrento Valley Road and improving local street circulation in Sorrento Valley. Local street improvements will separate local street

circulation from regional traffic. This will address competing access to the Sorrento Valley business center. Also being analyzed is removing an auto-rail conflict on Sorrento Valley Boulevard between Sorrento Valley Road and Roselle Street. This would be done by grade separating the two elements. Alternatively, the Sorrento Valley COASTER station could be moved southeast to Carroll Canyon. Other improvements will accommodate local circulation of transit, bicycles, and pedestrians. The City of San Diego is leading this effort, and an environmental document is expected in 2012.

4.3.4 Encinitas Boulevard Interchange

The Encinitas Boulevard/ Interstate 5 Interchange is located in the City of Encinitas. The interchange provides access to downtown, coastal attractions, the Encinitas COASTER Station, and commercial, retail and residential areas. Recent growth in the area has hindered interchange operations during peak hours. The Encinitas Boulevard Interchange Modification Project will construct improvements to ease congestion, improve traffic operations, and increase the safety of motorists, bicyclists, and pedestrians within the project area. The City of Encinitas is leading this effort, and an environmental document is expected in 2012. The project will include:

- Ramp replacement for both southbound ramps,
- A new lane on the southbound on ramp,
- Widening the southbound off ramp terminus,
- Adding an auxiliary lane in advance of the southbound off ramp,
- Widening the northbound off ramp terminus,
- Widening and restriping of Encinitas Boulevard,
- Adding tieback walls at the bridge abutments for the Encinitas Boulevard undercrossing,
- Adding bike lanes in both directions along Encinitas Boulevard,
- Adding sidewalks in both directions along Encinitas Boulevard, and
- Widening Saxony Road at the intersection of Encinitas Boulevard.

Currently, there are no sidewalks along Encinitas Boulevard within the interchange. Pedestrians must travel in existing bike lanes to cross the interchange. Several motorist/pedestrian accidents have occurred due to these conditions. Improvements increase pedestrian access, mobility, and safety. Bike lanes will also be striped throughout the project limits, allowing cyclists a dedicated traveled way.

The Encinitas COASTER Station is located within close proximity to the interchange. Many COASTER riders use or cross the interchange to access the station. Reducing congestion and improving the facility will increase access to the COASTER station. Moonlight Beach, downtown Encinitas and southern Leucadia are also directly accessed via the interchange.

4.4 COMMUNITY ENHANCEMENTS

4.4.1 Coastal Access and Recreation

In addition to improved mobility on the LOSSAN rail and I-5 highway corridors as well as other transportation enhancements that would increase coastal and recreational accessibility, community enhancement projects would further improve coastal access, recreational facilities, and neighborhood amenities. Caltrans and SANDAG met with communities to identify community enhancement opportunities in the corridor that would benefit from simultaneous construction and improve how the I-5 highway project interfaces with adjacent communities. Projects should implement both community and highway project goals. These enhancements would make connections in the existing bicycle and

pedestrian network, improve trails, and enhance other new and existing facilities. Design and construction of these features would occur in coordination with each affected city and include future formal cooperative agreements between Caltrans and each city, in which Caltrans would be responsible for construction and the cities would be responsible for maintenance. Details about each community enhancement element that is part of the I-5 NCC project is provided in the *I-5 NCC Project Draft EIR/EIS* and the *I-5 North Coast Community Enhancement Plan*.

Additionally, local roads cross I-5 at 37 locations within the travel shed. Many of these crossings do not have standard bicycle and pedestrian facilities and therefore do not facilitate non-motorized modes crossing the freeway.[5] As overcrossings are rebuilt and undercrossings are widened to accommodate additional lanes on I-5, pedestrian and bicycle facilities will be upgraded. Sidewalks on 26 of these crossings will be 10- to 12-feet wide on each side of the street. Sidewalks will be at least 17-feet wide at five crossings: California Street, Brooks Street, Mission Avenue, Bush Street (Oceanside), and MacKinnon Avenue (Encinitas). These enhanced crossings will improve access to schools and parks, and between the inland and coastal areas of I-5. Table 4-9 shows the status and plan for pedestrian and bicycle crossings over I-5.

TABLE 4-9: PEDESTRIAN AND BICYCLE ENHANCEMENTS ACROSS I-5

Facility Type	Existing Bicycle Facilities	Future Bicycle Facilities	Existing Pedestrian Facilities	Future Pedestrian Facilities
Non-Standard	35	11	22	6
Standard	4	27	15	26
Enhanced	0	1	0	5

Source: San Diego NCC– CSMP (Chapter 7), July 2010.

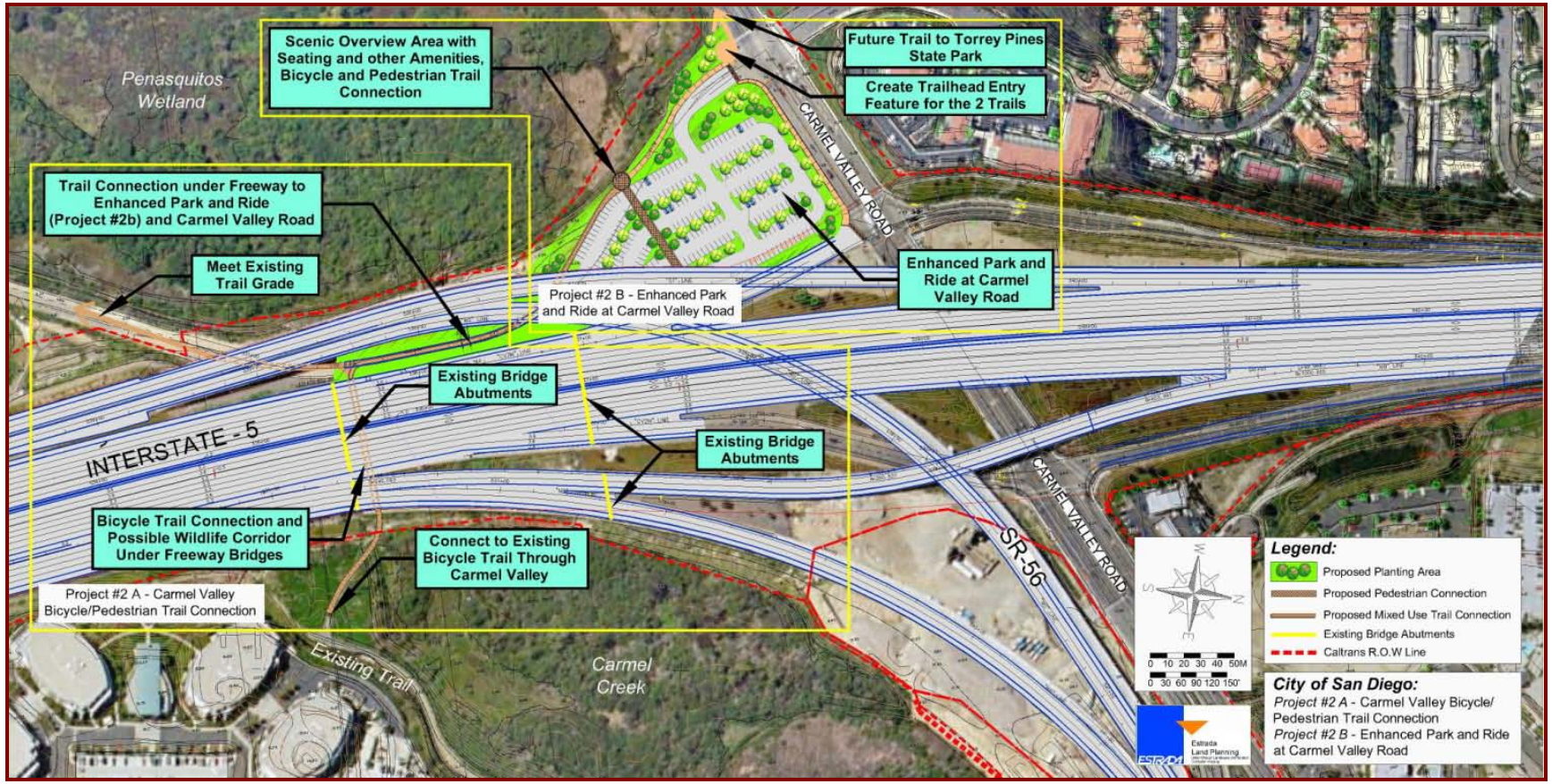
Other coastal access and recreation enhancements included in this Public Works Plan are described in the following sections.[6]

4.4.1.1 City of San Diego

- **Peñasquitos Creek Trail Connection –** Construct a trail connection under the freeway from Peñasquitos Creek to Sorrento Valley Road improving the linkage between the Sorrento Valley COASTER Station, residential and commercial developments near Sorrento Valley Road, and the existing trails at Peñasquitos Creek. The bicycle/pedestrian trail will go under Vista Sorrento Parkway, I-805 and I-5 and soil will be graded to provide an 8-foot clearance. The project will also include revegetating the area with native species and will act as a potential wildlife corridor. The improvements will take advantage of existing facilities in close proximity to provide a direct link serving recent development.
- **Carmel Valley Bicycle/Pedestrian Trail Connection –** A trail connection under the I-5 freeway structures will link the existing trail along Peñasquitos Lagoon easterly to the existing Carmel Valley trail, providing access to the lagoon and to the ocean and creating a link between three regional trail systems and to the proposed Carmel Valley Park and Ride trailhead (Figure 4-5). Additionally, this link is part of completing the Sea-to-Sea Trail from the Salton Sea to the Pacific Ocean.

[5] *San Diego NCC – CSMP* (Chapter 2), July 2010.
[6] Example figures are provided for some projects. Additional information about these projects in available *I-5 North Coast Community Enhancement Plan*, 2008

FIGURE 4-5: CARMEL VALLEY BICYCLE/PEDESTRIAN TRAIL CONNECTION AND ENHANCED PARK AND RIDE AT CARMEL VALLEY ROAD (SAN DIEGO)



Source: I-5 North Coast Community Enhancement Plan, 2008.

- **Enhanced Park and Ride at Carmel Valley Road –** The existing park and ride on the west side of I-5 at Carmel Valley Road will be enhanced to improve both the commuter and trail user experience (Figure 4-5). Project elements include improved paving leading to the trailhead, enhanced landscaping including a visual buffer between the trail and parking areas, and a trailhead and scenic overlook at Peñasquitos Lagoon at the west edge of the park and ride.
- **Pedestrian Overpass North of Del Mar Heights Road –** A new bicycle and pedestrian bridge over I-5 will connect Lozana and Lower Ridge Road, north of Del Mar Heights Road. The bridge will link two adjacent but currently divided neighborhoods and provide improved school and coastal access routes. New sidewalks will connect the bridge to existing neighborhood sidewalks.

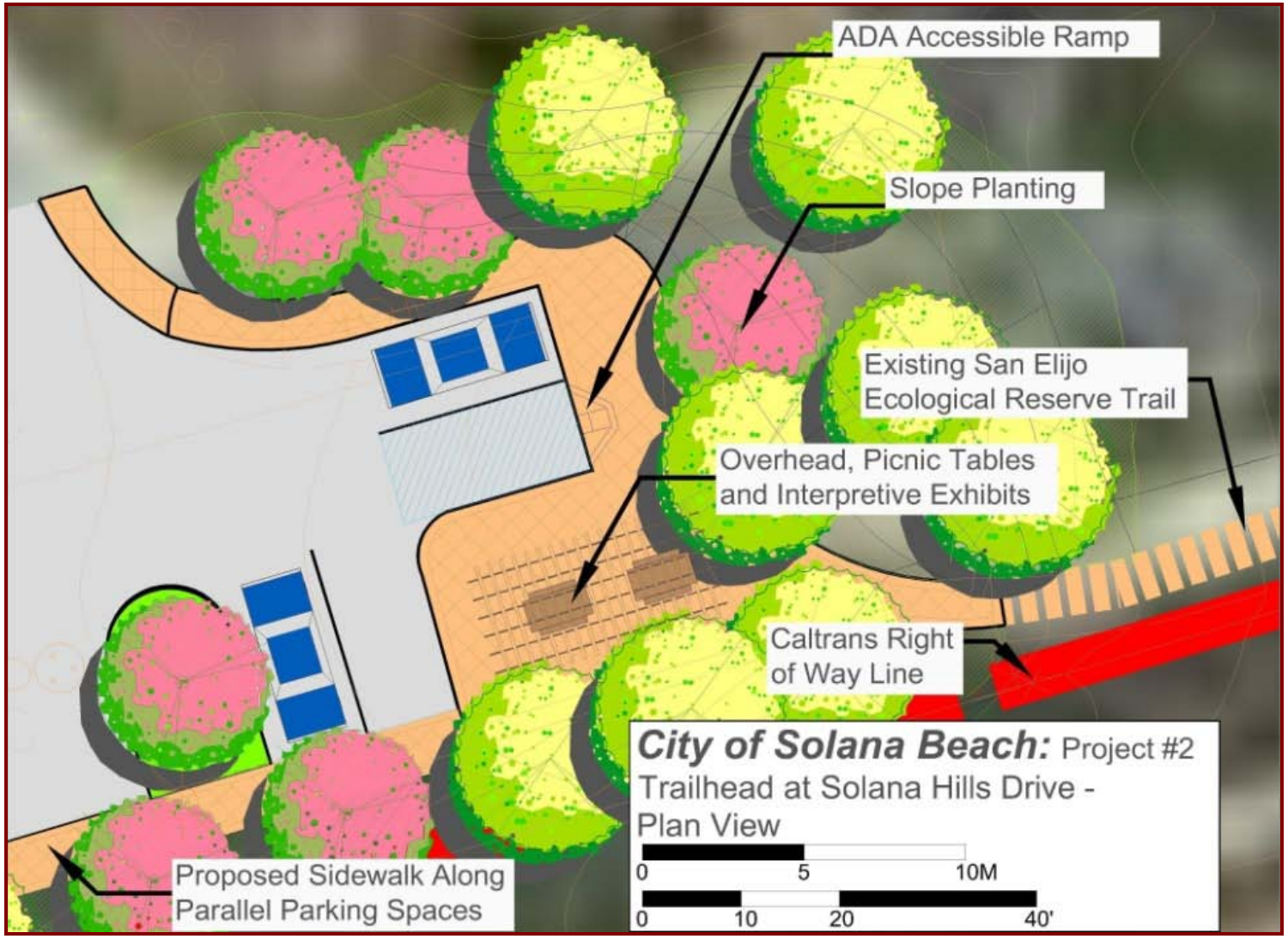
4.4.1.2 City of Solana Beach

- **Streetscape Enhancements on Ida Avenue –** Streetscape enhancements will be constructed along Ida Avenue from Academy Drive to south of Genevieve Street, including adding a sidewalk on the west side, curbs, street tree plantings, slope plantings, parkway planting where space permits, irrigation to support proposed plantings, and design and grading features to minimize the impact of a retaining wall. Improvements are consistent with the Eden Garden Master Streetscape Plan and Master Plan.
- **Trailhead at Solana Hills Drive with interpretive outlook over San Elijo Lagoon –** Street improvements along the northern end of Solana Hills Drive, and constructing a new trailhead at the south entrance to San Elijo Lagoon Ecological Reserve (Figure 4-6). Project will include parallel parking on Solana Hills Drive for trailhead visitors, pedestrian drop-off zone to facilitate trail access, street trees, street and security lighting, and shade 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 will encourage public use of the San Elijo Lagoon Ecological Reserve.

4.4.1.3 City of Encinitas

- **Manchester Avenue Pedestrian Bridge and Trail –** A new trail and associated sidewalk improvements will be constructed under the I-5 bridge structure at Manchester Avenue across San Elijo Lagoon connecting the existing trail segments, currently separated by the lagoon and freeway. These trail connections are identified in the Encinitas General Plan. This project consists of three basic components: 1) Paving and guardrails to improve the trail adjacent to the south bridge abutment with connecting trails on the east and west freeway slopes; 2) Constructing a pedestrian walkway structure across San Elijo Lagoon, suspended from the west side of the widened freeway bridge; and 3) Constructing streetscape improvements and a sidewalk on the south side of Manchester Avenue. Existing trails are heavily used but have limited continuity and there is no connection across the lagoon. The proposed connections will promote a unified and effective trail system.
- **Villa Cardiff Drive Improvements –** Sidewalks and trails will connect the Hall Property Park with the east side of the freeway across MacKinnon Bridge and south along Villa Cardiff Drive. The park and ride located at the corner of Birmingham Drive and Villa Cardiff Drive will be retained and enhanced with park-like amenities, new trees and a pedestrian connection to the north. These improvements will provide a link to the proposed Hall Property Park, which will provide recreational facilities and attractive landscaping.

FIGURE 4-6: TRAILHEAD AT SOLANA HILLS DRIVE (SOLANA BEACH)



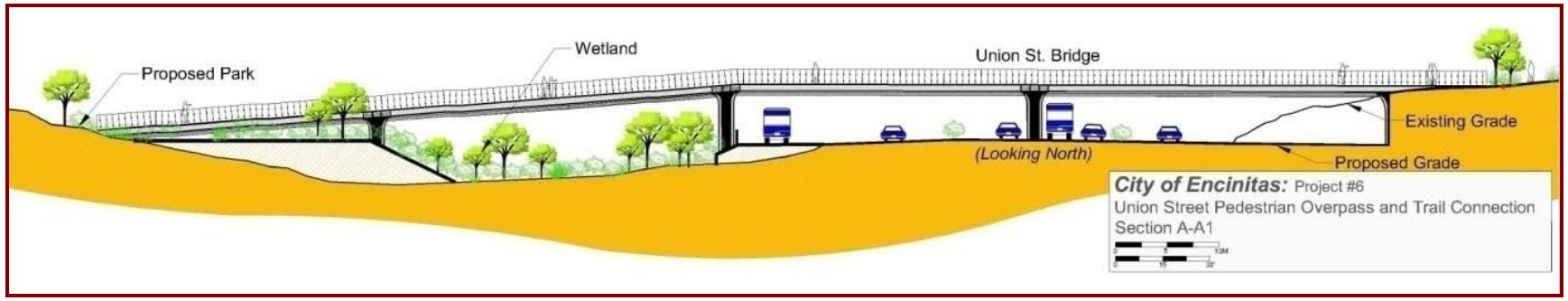
Source: I-5 North Coast Community Enhancement Plan, 2008.

- **Hall Property Park Trail Connecting to Santa Fe Drive –** Create a pedestrian connection between Hall Property Park and Santa Fe Drive thereby providing more direct and attractive access to the park from neighborhoods east of I-5. The project will include a trail from Santa Fe Drive, along the Caltrans right-of-way, to the edge of the Hall property park along with wayfinding signs and plantings.
- **Trail Connecting Santa Fe Drive to Requeza Street with Wetland Revegetation –** A north-south trail connection on the east side of I-5 will connect Santa Fe Drive on the southern edge and Requeza Street on the north. The new trail will connect to other trail improvements proposed in this program thereby providing convenient, park-like access to Hall Property Park.
- **Trail Connecting Requeza Street to Encinitas Boulevard –** New trail along the east side of I-5 connecting Requeza Street with Encinitas Boulevard between the freeway and existing commercial businesses to the east. Minimizing wetland impacts along with revegetation will be a part of the project.
- **I-5 Encinitas Boulevard and I-5 Santa Fe Drive Pedestrian and Bicycle Connections –** Bike lane and sidewalk improvements will pass under I-5 north at the Encinitas Boulevard and the Santa Fe Avenue interchanges, improving east/west connectivity. These routes will provide will provide links to the Pacific Coast Bicentennial Bicycle Route, Moonlight State Beach, and San Elijo State Beach.
- **Union Street Pedestrian Overpass and Trail Connection with Wetland Revegetation –** Trail along the west side of I-5 will connect Cottonwood Creek Park to Union Street and a bridge will provide pedestrian access across I-5 (Figure 4-7). A new park will be located at the western end of the pedestrian bridge on a vacant parcel owned by the City of Encinitas. The project will offer improved pedestrian infrastructure, better access to parks, and improved connections.

4.4.1.4 City of Carlsbad

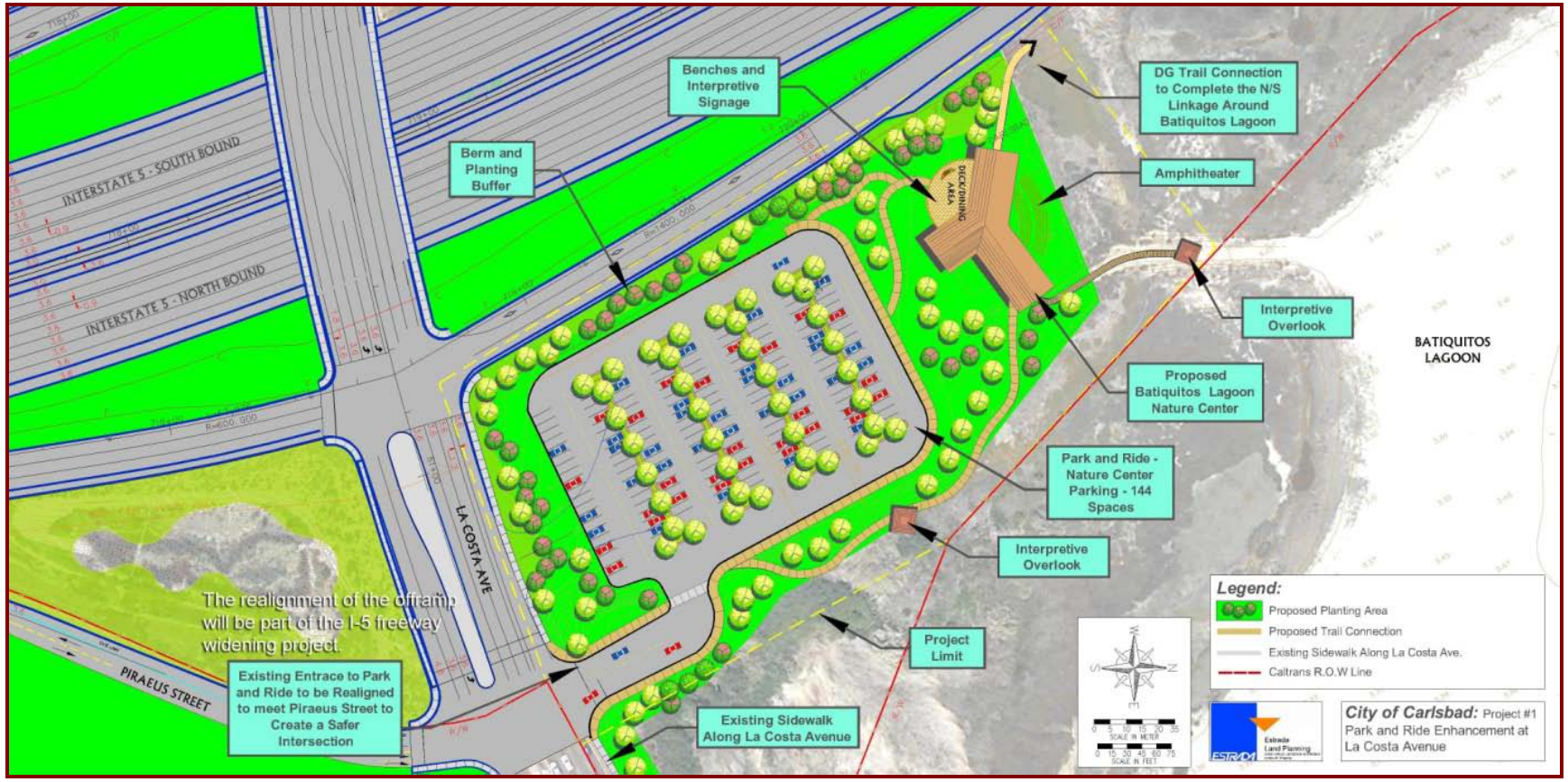
- **Park and Ride Enhancement/Nature Center at La Costa Avenue –** Add a nature center, lagoon overlooks, interpretive displays and additional parking at the existing park and ride at La Costa Avenue on the east side of I-5 (Figure 4-8). The nature center will include interpretive exhibits, gathering spaces, a meeting room, and an informal dining area. The project will also include new and/or improved trails, landscaping, and lighting. These enhancements would be developed in cooperation with the Batiquitos Lagoon Foundation and will provide for improved utilization of the park and ride, improved trail and public access and greater availability of environmental information for the public.
- **Trail on East Side of I-5 at Batiquitos Lagoon –** Trail connections across Batiquitos Lagoon to link the new nature center on the south side of the lagoon to the trails on the north side of the lagoon and the west side of Interstate 5. These links will be made with a suspended trail under I-5 to the lagoon trails on the west side of I-5 and the north side of the lagoon as well as trails connecting the new bridges to existing trails. These links will allow hikers and visitors to complete the circuit around the lagoon and provide better public access to the visitor center.
- **Trail on West Side of I-5 at Agua Hedionda Lagoon –** A new trail facility will be constructed on the west side of I-5 at Agua Hedionda Lagoon. The trail will include a pedestrian bridge beside the existing rail bridge spanning the mouth of the lagoon, a trail going to east to west along the southern edge of the lagoon, and switchbacks to meet the grade of a new trail between the freeway and power plant. This project addresses plans for Carlsbad's Rail Trail system and creates a loop around the lagoon.

FIGURE 4-7: UNION STREET PEDESTRIAN OVERPASS AND TRAIL CONNECTION (ENCINITAS)



Source: I-5 North Coast Community Enhancement Plan, 2008.

FIGURE 4-8: PARK AND RIDE ENHANCEMENT AND NATURE CENTER AT LA COSTA AVENUE (CARLSBAD)



Source: I-5 North Coast Community Enhancement Plan, 2008.

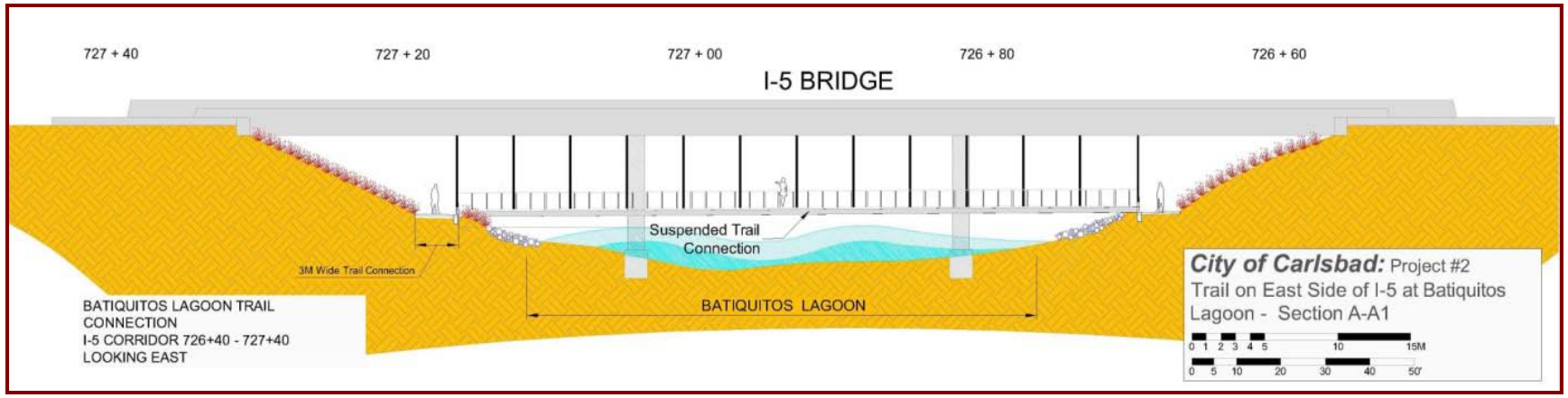
- **Trail on East Side of I-5 at Agua Hedionda Lagoon –** This project will connect the existing trail on the southern side of the lagoon to the lagoon's northern shore with a suspended trail on the east side of I-5 (Figure 4-9). Another suspended trail will cross under the freeway connecting the east side trail to the trail proposed in the project above. New trails will connect existing and planned trails to the new pedestrian bridges.

- **Streetscape Enhancements on Chestnut Avenue –** This project will enhance the existing pedestrian facilities along Chestnut Avenue within City and Caltrans right-of-way. This includes widened sidewalks, street trees, enhanced lighting for the underpass and potentially public art.

4.4.1.5 City of Oceanside

- **Pocket Park and Pedestrian Access at California Street –** Enhance the existing California Street Overpass to create a comfortable and convenient connection across I-5, including landscaping, pocket park at Moreno Way and I-5, widened sidewalks, and a more direct route residents of the Moreno Street neighborhood east to California Street. The existing bridge does not provide a pedestrian connection yet experiences high pedestrian traffic due to schools being located on both the west and east sides of the freeway. The pocket park and pedestrian connection from Moreno Street to California Street will use parcels acquired as part of the I-5 highway improvements.
- **Oceanside Boulevard Pedestrian Streetscape Enhancement –** Sidewalk and landscape improvements under and adjacent to the I-5 overpass. This includes new and improved sidewalks, improved screening of the SPRINTER tracks, and enhanced plantings, lighting and public art.
- **Enhancements to Division Street Overpass –** The pedestrian overpass will be widened and enhanced with special paving and landscaping. A roundabout could be implemented on the east side of the overpass to act as a traffic calming device and highlight the entrance to Ron Ortega Recreation Park. New sidewalks and street trees will enhance Brooks Street going north. Improvements will allow a more comfortable and attractive pedestrian crossing and an enhanced gateway to the park.
- **Enhanced Pedestrian Overpass Connection on Mission Avenue –** Wider and more direct pedestrian routes as well as realignment of the freeway on and off ramps to allow for signalized pedestrian crossings. This will improve pedestrian connections on a popular pedestrian route to current design standards. Oceanside High School is in close proximity to the freeway ramps and would benefit from improvements to pedestrian access.
- **Enhanced Pedestrian Overpass Connection on Bush Street –** This project will connect the existing community gardens at Civic Center Drive and Witzel Street across an enhanced overpass and following the freeway in a linear park to Mission Avenue. This will include new sidewalk and widening of existing sidewalks, community garden plots, a paved trail from the east side of the bridge along the on-ramp to Buena Street, and new and improved lighting and landscaping. This project will extend existing currently thriving community gardens and join the communities separated by I-5.
- **Community Open Space Park –** Parcels acquired as part of the freeway improvements will be converted into a shared use park for the City and the Family Recovery Center. Park design will be determined through other processes but could include meandering paths, water features, detailed native plantings and public artwork.

FIGURE 4-9: TRAIL ON EAST SIDE OF I-5 AT BATIQUITOS LAGOON (CARLSBAD)



Source: I-5 North Coast Community Enhancement Plan, 2008.

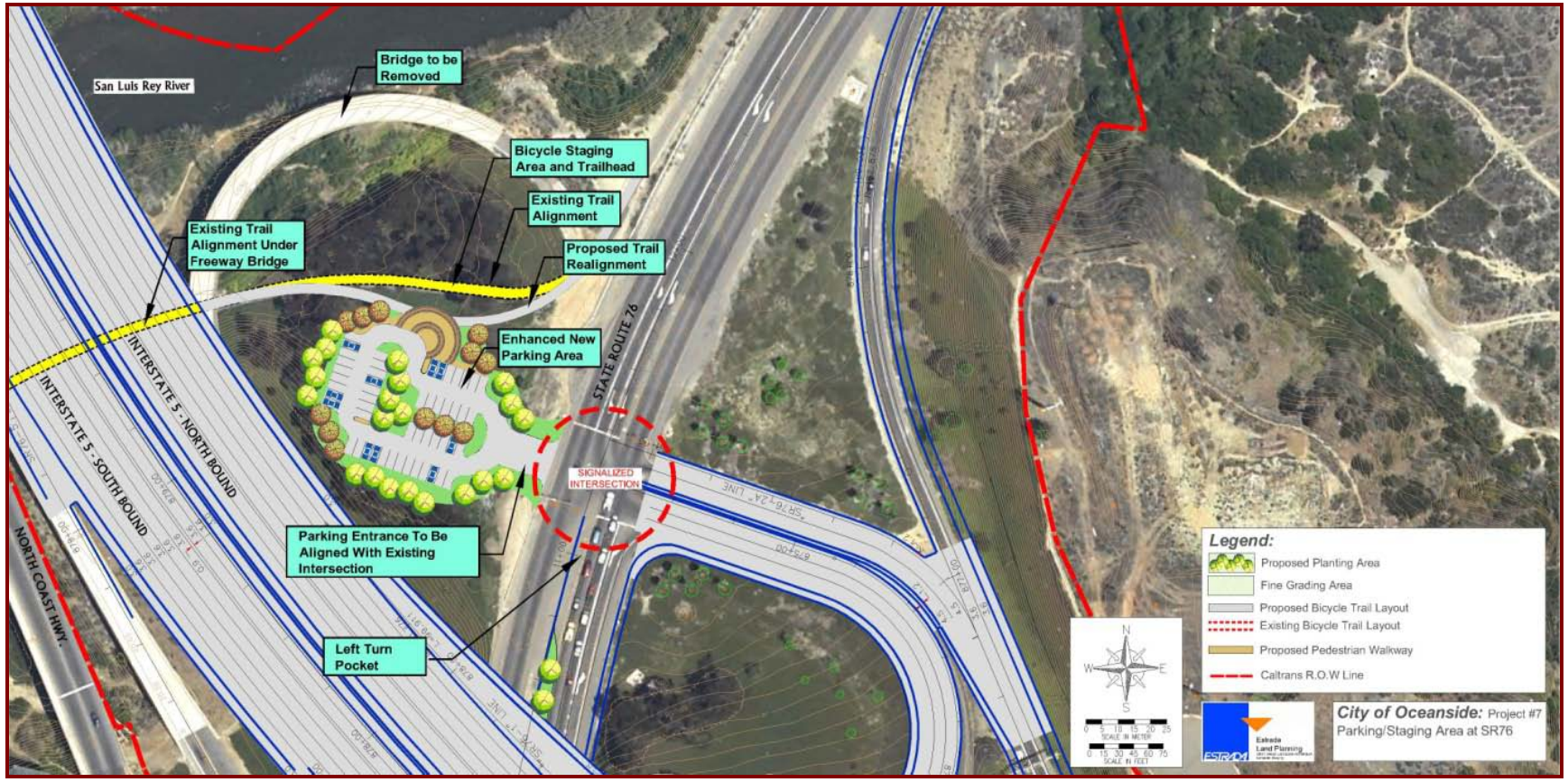
- **Parking/Staging Area for recreation at SR-76 –** A new parking area, trailhead staging area and other support amenities will support the existing San Luis Rey bike path and be located east of the intersection of I-5 and State Route 76 (Figure 4-10). An incomplete freeway bridge will be removed and the area will be restored. The existing bike trail does not have a defined trailhead or parking area and such a parking area could have a shared purpose as a park and ride, as peak use for each occurs at different times.
- **Parking/Staging Area for recreation at SR-76 –** A new parking area, trailhead staging area and other support amenities will support the existing San Luis Rey bike path and be located east of the intersection of I-5 and State Route 76 (Figure 4-10). An incomplete freeway bridge will be removed and the area will be restored. The existing bike trail does not have a defined trailhead or parking area and such a parking area could have a shared purpose as a park and ride, as peak use for each occurs at different times.
- **Pedestrian Underpass Improvements at San Luis Rey River –** Enhance the existing underpass under I-5 at San Luis Rey Drive. These improvements include a widened sidewalk, ADA compliant ramp connections, improved lighting and planting and public art. Option A would also include a sidewalk along I-5 northbound between San Luis Rey Drive and Monterey Drive. Option B would include an accessible trail connection from the undercrossing stairs on the east of I-5 to connect to a trail along San Luis Rey River. The existing undercrossing is used heavily by surfers and beach-goers to access to coast. Many have expressed they are uncomfortable using the existing isolated facility.
- **Regional Gateway Feature at Harbor Drive –** A regional gateway feature will include creative paving, evocative landscaping, and structures to reflect regional identity as an entry to Oceanside and the County. Design will be developed with input from the community.

4.4.2 Natural Resource and Environment

A wide range of projects are planned to restore and protect water quality and environmentally sensitive habitat areas (ESHA) in the NCC. The TREP/PWP improvement program will upgrade I-5 corridor facilities with current treatment BMPs to the Maximum Extent Practicable (MEP). The program will include analyzing the entirety of the corridor from a water quality perspective in relation to the impaired receiving water bodies in the NCC and provide for a more comprehensive approach to analyze the hydrology of the entire project area for purposes of improving water quality. Treatment BMPs would consist of permanent measures to improve storm water quality during the operation of the facility after completing the construction. Caltrans approved treatment BMPs which may be used where feasible currently include biofiltration systems, infiltration devices, detention devices, dry weather flow diversions, gross solid removal devices (GSRDs), media filters and wet basins. Preliminary locations for bioswales and detention basins have been determined and are shown in Figure 4-1 through Figure 4-7.

In addition to providing a comprehensive approach to addressing water quality for the NCC, the TREP/PWP includes a Resource Enhancement Program as part of the Implementation Framework, described in more detail in Chapter 6, which provides a consistent, comprehensive, and proactive planning and management process to address project-specific impacts with regional resource enhancement efforts throughout the corridor. The enhancement of natural resources in the NCC requires a unique, comprehensive approach to resource enhancement with input from multiple regulatory agencies and stakeholders. For this reason, the Resource Enhancement Program maintains flexibility when prioritizing and phasing resource enhancement projects as advanced or concurrent mitigation for potential transportation project impacts, as well as projects which are not mitigation but instead inherently enhance resources as a result of project implementation.

FIGURE 4-10: PARKING AND STAGING AREA FOR RECREATION AT SR-76 (OCEANSIDE)



Source: I-5 North Coast Community Enhancement Plan, 2008.

The result of project implementation through the TREP/PWP would be a coordinated and comprehensive program for mitigation and resource enhancement which exceeds traditional and often-fragmented project-specific mitigation benefits by strategically acquiring restoration opportunities and preserving ESHAs in conjunction with facilitating comprehensive restoration plans for the region's most significant coastal resources. The TREP/PWP Resource Enhancement Program includes multiple elements for completing and facilitating resource enhancement and habitat mitigation on a corridor-wide level, focusing on securing no net loss of habitat, habitat preservation, and facilitating comprehensive lagoon restoration, maintenance, and planning programs.

Regionally important restoration opportunities in the I-5 corridor have been discussed with the resource agencies. As discussed in Chapter 2, San Elijo and Buena Vista Lagoons are the two lagoons within the project limits where planning for large-scale restoration plans is underway. SANDAG/Caltrans have been working with the cities and resource agencies to help move these restoration projects forward by assisting in the planning and helping to fund some of the technical studies necessary for the planning and environmental review process.

In addition to the regionally important lagoon mitigation, SANDAG/Caltrans are funding a study to optimize I-5 bridges proposed for replacement for water exchange on either side of I-5. Scientists from Scripps Institution of Oceanography and a consultant team are in the process of examining all aspects of lagoon tidal and freshwater hydrology and will propose bridge designs to minimize tidal muting east of I-5 and lead to the possible enhancement of the existing wetlands. The objective of the study is to evaluate potential effects of bridge widening and formulate bridge design concepts that are hydraulically more efficient and would enhance water quality and reduce tidal muting. By reducing tidal muting with new hydrodynamically optimized I-5 waterway designs, increased tidal inundation can be achieved in the wetlands east of I-5, resulting in an increase in inter-tidal wetland habitat. This study is in its beginning stages; however, the result could enhance wetland habitat and water quality within the lagoons, especially east of I-5. Results of this study would be documented in the Final EIR/EIS for I-5, and design features to enhance water flow in the lagoons would be incorporated into final bridge designs.

4.4.2.1 Los Peñasquitos Lagoon

Construction of a new bridge on Sorrento Valley Road over Soledad Creek by the interchange of I-5 and SR-56, in place of the three box culverts, is needed to meet design standards for hydrological flows under I-5 and provide for emergency vehicle and utility maintenance access. This area of Sorrento Valley is closed to vehicles and is now only open to pedestrians and bicyclists. The current condition restricts flows and impedes wildlife movement. The bridge will enhance wildlife movement by allowing wildlife to move under Sorrento Valley Road and I-5.

In addition, SANDAG/Caltrans acquired the Pardee Carmel Valley property adjacent to and north of Las Penasquitos Lagoon which would provide 11.5 acres of wetlands creation, 10.7 acres of upland habitat creation, and 5.7 acres of upland habitat restoration.

4.4.2.2 San Dieguito Lagoon

SANDAG and Caltrans, in cooperation with the San Dieguito River Valley Joint Powers Authority, are proposing to implement creation of approximately 50 acres of coastal salt marsh adjacent to the Southern California Edison (SCE) restoration project in San Dieguito Lagoon. In addition to the 50 acres of coastal salt marsh creation opportunity, approximately 57 acres of upland habitat would be created along the berms around the wetland and in a native grassland floodplain area adjacent to the wetland. Approximately 2.73 acres of the 107 acres has been reserved by the JPA for their own

mitigation needs outside of the projects listed in the TREP/PWP. The remainder of the created coastal salt marsh and upland habitat would be used as mitigation for the I-5 North Coast Corridor Project.

SANDAG/Caltrans, the City of Del Mar, and the San Dieguito River Valley Land Conservancy (SDRVLC) either own or are in the process of purchasing several small parcels of land along Racetrack View Drive and the San Dieguito River. These parcels are currently on fill vegetated with ice plant with salt marsh habitat at the river's edge. Resource enhancement efforts would create salt marsh habitat on the approximately 2 acres of fill habitat. The property would be turned over to the SDRVLC for management in perpetuity.

In addition, SANDAG/Caltrans purchased the Dean Family Trust site immediately east of I-5 and south of San Dieguito Lagoon. The area is currently vegetated with weedy species and some coyote brush (*Baccharis pilularis*). Approximately 5 acres of this parcel are proposed for a detention basin or water-quality treatment area. 21.6 acres of the property would be used to create upland and 1.5 acres with existing upland habitat would be preserved.

4.4.2.3 San Elijo Lagoon

San Elijo Lagoon is one of the last lagoons within northern San Diego County that has not yet had a major restoration project. Currently, the City of Encinitas, USACE, USFWS, CDFG, County of San Diego, California Coastal Conservancy and the San Elijo Lagoon Conservancy are working to complete a large-scale restoration and enhancement plan for the lagoon, as well as a Draft EIR/EIS. This includes restoration of the hydrological regime and the marsh habitat that is being converted from mudflats and low marsh to middle and high marsh. SANDAG/Caltrans participated with the City of Encinitas and the USACE to determine the optimal bridge opening at I-5 and assisted with the funding for the planning. Based on this work, it is likely that the I-5 and LOSSAN bridges over San Elijo Lagoon would be modified to maximize the circulation and wildlife habitat within the lagoon. The length of the bridges will be determined by the San Elijo Lagoon Restoration Environmental Document.

Structural and other potential improvements, such as facilitating the creation of a new inlet on Coast Highway south of restaurant row in Cardiff by the Sea, would be proposed as non-habitat mitigation for impacts associated with the NCC projects. These large construction projects could ultimately facilitate the restoration of many hectares of marsh and help to ensure its continued functioning. Although this would not create a large quantity of wetlands, the restoration project would help enhance all lagoon functions and decrease tidal muting effects. SANDAG/Caltrans funded hydraulic studies by the Scripps Institution of Oceanography and the WRA to develop the restoration documents. This large regional restoration project would greatly enhance coastal lagoon habitat, in particular mud flats, which are relatively rare within the region.

In addition, upland slopes around the proposed DAR at Manchester Avenue would be planted with CSS and other native habitats to mitigate for upland impacts.

4.4.2.4 Batiquitos Lagoon

Batiquitos Lagoon has already undergone a large-scale restoration project funded by the Port of Los Angeles that began in 1994. No additional large-scale mitigation opportunities have been identified at this lagoon, but several parcels for preservation of upland habitat have been identified, and some small parcels along the edge of the lagoon have been identified for purchase and preservation as permanent open space. Potential hydraulic improvements resulting from the Scripps Institution of Oceanography and WRA study will be explored. In addition, SANDAG/Caltrans purchased the La Costa which supports approximately 20.5 acres of coastal sage scrub habitat occupied by California gnatcatcher on

the south side of La Costa Avenue just east of I-5 on the bluff overlooking the lagoon, which is proposed for preservation.

4.4.2.5 Agua Hedionda Lagoon

SANDAG/Caltrans purchased two properties that were proposed for development on the eastern side of the lagoon, referred to as the Hallmark and Lazar properties. These properties are a combination of disturbed coastal sage scrub, salt marsh, and disturbed habitat along the northern shore of the eastern basin. Approximately 1.5 acres of wetland habitat and 14.4 acres of upland habitat have been identified for preservation. Habitat enhancement would include the creation of approximately 4.2 acres of salt marsh and combination of restoration and preservation of remaining coastal sage scrub habitat. Some of the coastal sage scrub habitat is currently occupied by the threatened coastal California gnatcatcher. This site would be transferred to the California Department of Fish and Game and managed as part of their Ecological Reserve.

4.4.2.6 Buena Vista Lagoon

The Buena Vista Lagoon Foundation and Technical Advisory Committee (BVTAC) have proposed options including keep the lagoon all freshwater, to have a mix of salt and freshwater habitat, or open up tidal flushing to convert Buena Vista Lagoon to all saltwater. Currently, the BVTAC is pursuing the proposal to convert Buena Vista Lagoon to all saltwater habitat. The BVTAC will complete a restoration plan and a Draft EIR/EIS. Depending on the preferred alternative, this would require modifying the inlet from the ocean, a modified bridge at I-5 and other restoration. SANDAG and Caltrans are currently working with the CDFG and the BVTAC to identify key restoration opportunities that could serve as future mitigation for the NCC projects. The restoration plan is in the process of being drafted and the alternatives are so variable that it is not clear what would be most beneficial for the lagoon. At this time, the restoration plan is not mature enough to indicate where preferred habitat could be restored so site acquisition is premature.

4.4.2.7 Cottonwood Creek

There is a small creek flowing intermittently above- and belowground through Encinitas between San Elijo and Batiquitos Lagoons. Cottonwood Creek Park was recently created west of I-5, restoring the creek to an aboveground channel between I-5 and the ocean. Moonlight Creek is a small tributary primarily carrying urban runoff from both sides of the freeway parallel to I-5 and immediately west of I-5 where it enters Cottonwood Creek at the park. There is some riparian habitat along this drainage, but the habitat is also disturbed with giant reed, pepper trees, nasturtium (*Tropaeolum majus*), ice plant, and eucalyptus trees. This creek could be restored, as could the slopes, which are a mixture of disturbed CSS and ornamental plants. Restoration of this area with a walking trail along the sewer easement has been identified in the as a community enhancement by Caltrans landscape architecture and by the City of Encinitas as a preferred option. Approximately 1.4 hectares (3.5 acres) of riparian habitat and 2.0 hectares (5.0 acres) of CSS could be restored in this area.

4.4.2.8 Encina Creek

Encina Creek is a small, constricted creek with no lagoon at the outfall to the ocean. The creek flows through culverts under I-5 and through the Encina Sewer Treatment Plant west of I-5. Immediately east of I-5 the creek is heavily disturbed with invasive plant species, trash, and poor water quality. Upstream of I-5 a few mitigation projects have been completed already. There may be additional opportunities to remove exotic species and restore habitat throughout Encina Creek.

4.4.2.9 Loma Alta Creek

Loma Alta Creek is a very disturbed constricted creek that flows parallel to Oceanside Boulevard in a developed portion of Oceanside. West of I-5 the creek is channelized where it flows through a trailer park to an industrial area prior to reaching the ocean through a highly constricted culvert. The portion through the trailer park is within concrete channel with little area for restoration; however, west of the trailer park the creek is in an earthen channel surrounded by industrial businesses. There may be an opportunity in this portion of the creek to greatly enhance the wetland habitat and water quality before the water empties into the Pacific Ocean.

4.4.2.10 San Luis Rey River

The San Luis Rey River near I-5 is a large open water channel with primarily freshwater marsh and arundo scrub along the banks. Two projects proposed for the area, Coast Highway Seismic Retrofit and the recently completed Pacific Street Bridge have already proposed restoration of the wetlands along the banks of the river through exotic removal and revegetation with natives. Mitigation for impacts at the San Luis Rey River would be completed by restoring areas on site.

4.4.2.11 Upland Habitat

Compensatory mitigation for upland habitats would likely encompass a mixture of creating new CSS and other native habitat and purchasing parcels of high quality habitat near the lagoons for preservation. Several parcels have been identified around the lagoons for potential purchase for upland mitigation.

5.0 COASTAL DEVELOPMENT POLICIES AND RESOURCES

INTRODUCTION

This chapter evaluates the scope of improvements included in the North Coast Corridor (NCC) TREP/PWP (as described in Chapter 4) for consistency with applicable coastal development policies of the Coastal Act, and, where applicable, includes a brief summary evaluation of consistency with local coastal program (LCP) policies for each affected, certified city in the NCC. The chapter builds on the discussion of mobility and resource deficiencies, and the vision and goals for the NCC described in Chapter 3, as these issues relate directly to the ability to evaluate potential coastal resource concerns and opportunities presented by the scope of improvements.

This chapter includes 10 sections, nine of which evaluate the scope of improvements for consistency with applicable coastal development policies, and are organized by the following Coastal Act issue areas: 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; Water Quality and Wetlands; 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; and 5.9 – Agricultural Resources.

Each of the Coastal Act issue area sections begins with a setting description of existing coastal resources in the NCC that could be affected by the scope of improvements. A discussion of potential coastal resource concerns, developed in consultation with Coastal Commission staff as general guidance in identifying potential resource issues to help frame the TREP/PWP impact analysis, is provided after each coastal resource setting description, which is then followed by an impact analysis for the proposed LOSSAN rail and I-5 highway corridors improvements. The resource area impact analyses reflect those discussions contained within the *LOSSAN Final Program EIR/EIS* (September 2007) and the *Interstate 5 North Coast Corridor Project Draft EIR/EIS* (June 2010), where applicable.

Each section then includes a discussion of resource opportunities and benefits presented by the scope of improvements followed by a series of design/development strategies for proposed LOSSAN rail improvements, and policies and implementation measures for the proposed I-5 highway and community enhancement improvements. The design/development strategies for rail improvements reflect potential strategies and mitigation measures contained within the *LOSSAN Final Program EIR/EIS*. Project-level analysis for proposed rail improvements would not occur until project alternatives are chosen, preliminary design, engineering, and resource impact analyses have been developed, and mitigation measures and monitoring plans have been prepared. The design/development strategies for the proposed rail improvements are intended to provide guidance in addressing applicable Coastal Act policies for rail development projects that would be subject to future federal consistency review. As the proposed rail improvement plans are further developed, additional design/development strategies to address potential impacts to coastal resources would be evaluated by the lead agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable. The policies and implementation measures for highway and community enhancement improvements reflect applicable mitigation measures contained within the *Interstate 5 North Coast Corridor Project Draft EIR/EIS*, which may be subject to refinement as part of the public review process and pending selection of a preferred I-5 alternative.

The Coastal Act Consistency analysis lists Coastal Act policy directives addressed in each section and evaluates proposed rail and highway corridors improvements for consistency with applicable policy

requirements. The consistency analysis includes a discussion of how design/development strategies for proposed rail improvements could serve to address potential coastal policy issues for rail projects subject to future federal consistency review, when applicable and appropriate, and how the proposed policies and implementation measures for the highway and community enhancement improvements would ensure the overall scope of improvements could be implemented consistent with applicable Coastal Act requirements.

The Coastal Act issue area sections conclude with a brief summary of the TREP/PWP's potential consistency with LCP policies for each certified city in the corridor affected by the scope of improvements, and includes a preliminary assessment of where specific LCP policies present potential conflicts for the highway PWP improvements that could require amendment of the certified LCPs to ensure consistency of the PWP with applicable policies. A more detailed, preliminary policy consistency analysis for each certified LCP in the corridor that could be affected by proposed TREP/PWP improvements is provided in the LCP consistency analysis matrix for each city (Appendix A), which may be subject to refinement as part of the public review process and pending selection of a preferred I-5 alternative.

As detailed in Chapter 1 and Chapter 4 of the TREP/PWP, the LOSSAN rail corridor projects that improve the movement of freight fall under the exclusive jurisdiction of the Surface Transportation Board and are therefore not subject to coastal development permit or public works plan requirements. As such, the certified LCPs would not serve as the standard of review for the rail improvements that would improve the movement of freight as identified in Chapter 4. Therefore, the design/development strategies and LCP consistency analysis included in this chapter may provide non-binding guidance in evaluating such rail improvements for consistency with applicable California Coastal Management Program/Coastal Act policies in the context of the TREP/PWP vision, goals, and objectives for the overall transportation system.

The last section of this chapter, 5.10 – Coastal Act Policy Conflict Resolution, revisits the coastal development policy/consistency analysis in each of the proceeding nine sections in the context of the Coastal Act directive to resolve potential Coastal Act policy conflicts in a manner, which on balance, is the most protective of significant coastal resources.

5.1 ENERGY CONSERVATION AND EMISSIONS REDUCTION

5.1.1 Energy Conservation and Air Emissions

From 1970 to 2006, San Diego County more than doubled in population to over 3 million residents. Most of the population growth was due to longer lifespans and increased birthrates versus migration into the region. Growth has occurred not only in San Diego County and the North Coast Corridor (NCC) project area, but also in adjacent regions accessed by the I-5 highway and LOSSAN rail corridors, including Orange County and Riverside County to the north, Baja, California and Mexico to the south, and Imperial County to the east. During this period, travel demand in the corridor has largely been driven by this multi-regional population and housing growth as development has occurred beyond the corridor and more people commute longer distances for housing and employment. Through 2050, however, it is forecast that land use and development patterns will change from past patterns of expansion into far reaching and undeveloped areas to a focus on new infill development in existing developed areas. As a result, 56% of new residences and 42% of new jobs in the San Diego region are forecast to be located within a 10-minute walk of high-frequency transit stations. The policies and trends toward Smart Growth[1] indicate that development of new transportation facilities will be necessary to continue to meet interregional and regional travel demand, as well as corridor and localized growth and travel demand.

Transportation has a direct and significant effect on energy consumption, air quality, and greenhouse gas (GHG) emissions. Historically, travel has increased at a higher rate than population growth. In the NCC, established land use patterns of low density and segregated uses lead to a high dependence on the private automobile. Congestion and circuitous routes due to the corridor's topography further increase energy consumption, air quality impacts, and vehicle emissions. As the region's transportation system and infrastructure expand to keep pace with projected population and travel growth, changing policies emphasizing multi-modal transportation networks focused on Smart Growth areas and high occupancy vehicle (HOV) travel (carpools, vanpools and transit), combined with new technologies that reduce energy consumption and vehicle emissions will help minimize or reduce growth in energy consumption, air pollution and emissions. Within the NCC, some measures to reduce energy consumption and improve air quality are already in place. The LOSSAN rail corridor provides an alternative to automobile travel in the corridor through both intercity and commuter rail. The corridor has existing bicycle and pedestrian facilities. Local governments are also working to implement planned Smart Growth development, which would lower the demand for automobile trips.[2]

Energy, air quality, and GHGs are interrelated when it comes to transportation. Reductions in energy consumption resulting in changes in travel behavior and technological advances often lead to reductions in air pollutants and GHG emissions. The Coastal Act seeks to minimize energy consumption and vehicle miles traveled (VMT) within the coastal zone, which, in turn, can assist in ensuring consistency with regional air pollution control district or California Air Resources Board requirements, and state legislation relating to potential air pollution emissions and GHGs.

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1 Smart Growth focuses housing and jobs within urban areas served by a multi-modal transportation system, which, in turn, reduces urban sprawl and preserves open space, agricultural, and natural resource areas.

2 *Trip Generation for Smart Growth: Planning Tools for the San Diego Region*, SANDAG, June 2010.

5.1.1.1 Energy Conservation

Transporting goods and people account for roughly half of California's energy consumption.[3] As population and travel have grown over the past several decades, the energy needed to power this movement of people and goods has grown correspondingly. While state and federal policies are increasing the use of alternative fuels and low-emission vehicles, consumption of non-renewable resources, such as fossil fuels, remains high. Current and future energy consumption in the NCC is largely a function of the demand for movement of goods and people along both the LOSSAN rail corridor and I-5 highway corridor.

LOSSAN Rail Corridor

The LOSSAN rail corridor between San Luis Obispo and San Diego is the second busiest intercity rail corridor in the nation. As shown in Table 5.1-1, the Amtrak Pacific Surfliner, which operates along the corridor between San Diego and San Luis Obispo, carries approximately 2.8 million annual riders (approximately 7,000 a day), including 912,00 annual riders within the NCC. Amtrak's 20-Year Improvement Plan projects ridership to increase to 5.8 million annual riders (15,800 a day) by 2020 along the Pacific Surfliner route. COASTER ridership, which is contained entirely within the NCC, has more than tripled since service was initiated in 1995 to over 1.5 million riders annually (approximately 6,000 weekday riders). With the proposed LOSSAN corridor improvements in the NCC, COASTER ridership is projected to increase to over 12,900 passengers each weekday by 2030, and will have the capacity to carry up to 20,000 weekday (5.0 million annual) passengers.[4] Metrolink Commuter Rail serves the Oceanside Transit Center in the NCC as its southernmost terminal station, currently attracts approximately 1,450 passenger boardings at the Oceanside Station. Overall, annual ridership on the LOSSAN corridor rail services within the NCC is expected to almost double between 2008 and 2030, from approximately 2.8 million passengers to 5.5 million. As a result, the number of passenger trains in the corridor will increase an estimated 56%, resulting in a corresponding 56% increase in energy consuming passenger locomotives in the corridor.[5]

In addition to passenger rail service, the LOSSAN corridor also accommodates freight rail. Between 2005 and 2020 the number of freight locomotive miles traveled along the entire LOSSAN rail corridor will increase an estimated 66% (most freight trains require four locomotives). By 2020, the combined increase in passenger and freight locomotive miles in the corridor is estimated to be 62% above 2005 levels.[6] These changes will increase the energy consumption by locomotives in the LOSSAN corridor.

In addition to greater energy consumption resulting from higher train volumes and more locomotives traveling on the LOSSAN corridor, there is a direct relationship between rail corridor congestion and energy consumption by trains. Energy consumption increases as rail corridors become more congested. Bottlenecks due to single-tracked railway sections (currently more than half of the corridor) result in inefficient locomotive idling. Additionally, at-grade crossings in urban areas require speed reductions. These factors all decrease the efficiency of locomotive travel and further increase energy consumption. Current bottlenecks and speed restrictions will continue and increase under the No Build Alternative, exacerbating the increased energy use from higher volumes of trains and locomotive miles in the corridor. Planned improvements to the LOSSAN corridor would address current corridor

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3 California Energy Commission. Consumer Energy Center: Transportation,, 2006. http://www.consumerenergycenter.org/transportation/index.html

4 *San Diego NCC–Corridor System Management Plan* (Chapter 4), July 2010.

5 *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007.

6 *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007.

operating deficiencies, which would help reduce congestion and improve speeds, and lead to greater energy conservation.

TABLE 5.1-1: LOSSAN CORRIDOR PASSENGER BOARDINGS (2008 EXISTING AND 2020/2030 PROJECTED)

	2008		2020 / 2030	
	Daily	Annual	Daily	Annual
Amtrak (Pacific Surfliner)	7,000[7]	2.8 million[8]	15,800[9]	5.8 million[10]
North Coast Corridor				
Amtrak (North Coast Corridor)	2,300*	912,000[11]	5,200*	1.9 million*
Coaster Commuter Rail	6,000	1.5 million**	12,900[12]	3.2 million**
Metrolink (at Oceanside Station)	1,450	370,000**	NA	NA
Total NCC	9,750	2.8 million	19,550+***	5.5 million+***

* Approximated from 2008 annual NCC to Pacific Surfliner ridership.
** Assumes a 250 annualization factor for daily ridership.
*** Includes 1,450 Oceanside Transit Center Metrolink boardings in 2008.

I-5 Highway Corridor

In 2006, California's 24 million automobiles consumed more than 17 billion gallons of petroleum, a large percentage of which was used in populated and auto-dependant southern California.[13] In the NCC, during the same timeframe, 95% of trips were made by automobiles,[14] resulting in significant energy consumption in the corridor attributable to auto use.

An individual automobile's energy consumption per mile is the result of many variables, such as the type of vehicle, including make, model, size, and fuel technology; roadway terrain where steep grades result in greater fuel consumption; and travel speeds, which is a function of both posted speed and traffic congestion. On a broader scale, data and projections about vehicle energy consumption at the corridor and regional levels can generally be extrapolated from two key travel factors:

- Vehicle Miles Traveled (VMT) – which is the total number of miles traveled by all vehicles on a peak period, daily, and/or annual basis.
- Vehicle Hours Traveled (VHT) – which is the total number of hours vehicles spent travelling during a period of time. It is directly related to traffic volumes, levels of traffic congestion, and the resulting average speed (miles per hour (mph)).

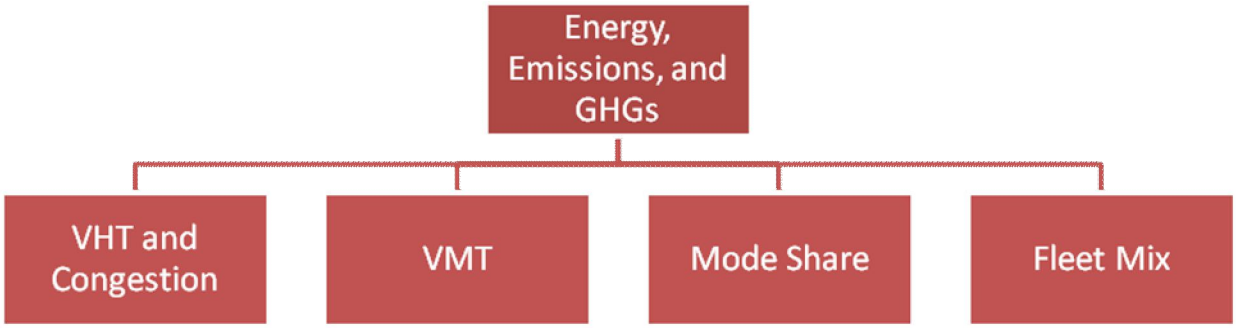
While VMT and VHT can act as proxies for measuring vehicle energy consumption in the corridor, it is misleading to assess such at the corridor level. Policies, plans, and programs to reduce transportation energy consumption, as well as improve air quality and address GHG emissions are appropriately established and evaluated on a regional level by both SANDAG and the State of California. These regional policies capture the combined and interrelated influence of various components of the regional

7 *San Diego NCC–CSMP* (Chapter 4), July 2010
8 *San Diego NCC–CSMP* (Chapter 4), July 2010.
9 *LOSSAN Final Program EIR/EIS* (Section 1-0), September 2007.
10 *LOSSAN Final Program EIR/EIS* (Section 1-0), September 2007.
11 *LOSSAN Final Program EIR/EIS* (Section 1-0), September 2007.
12 *San Diego NCC–CSMP* (Chapter 4), July 2010.
13 *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007.
14 SANDAG Urban Area Transit Strategy 2008 Transit Trip Mode Share by District Model Results (District 12).

transportation system on energy consumption. The purpose and role of the proposed NCC transportation improvements are to efficiently move more people (versus more cars) to, from, and through the corridor as part of the regional transportation network. Given the regional nature of the transportation system, travel behavior (i.e., travelers do not know corridor boundaries), and energy consumption, looking at the regional relationships among vehicle travel, population, and person trip characteristics (travel mode) provides a more meaningful discussion of the proposed NCC project influence on energy consumption and conservation than restricting analysis to the corridor alone. More directly, the proposed NCC transportation improvements are intended to support regional policies to shift travel toward HOV and transit use; therefore, an assessment of the role the corridor transportation improvements play in the region (by considering regional VHT, VMT, VMT per capita, and HOV/transit mode share) is as important as the assessment of corridor-only VHT and VMT to the energy consumption discussion.

Figure 5.1-1 displays the interrelationships of these transportation factors for not only energy consumption, but also for air pollutant and GHG emissions, which are discussed in following sections.

FIGURE 5.1-1: DEFINING TRANSPORTATION FACTORS FOR ENERGY, AIR POLLUTANT EMISSIONS, AND GREENHOUSE GAS EMISSIONS



Within the NCC, existing and projected daily VMT on I-5 is shown in Table 5.1-2. The data indicates that VMT on I-5 will increase by almost 30% by 2030 without any improvements to corridor facilities (i.e., the No Build Alternative). Planned improvements would lead to an incremental 8% increase in VMT on I-5 over the No Build Alternative. The 8% increase appears to be the combined result of latent demand (i.e., improved access) and a shifting of travel from the parallel arterials of Pacific Highway and El Camino Real to I-5 as travel becomes more efficient on I-5 and avoidance behavior is minimized.

TABLE 5.1-2: VEHICLE MILES TRAVELED (I-5 NORTH COAST CORRIDOR)

	Existing (2006)	No Build (2030)	No Build% Change from Existing	I-5 Project*	I-5 Project Percent Change from No Build
Daily VMT	5.44 million	7.05 million	29.6%	7.63 million	8.2%

Source: *San Diego NCC–CSMP* (Chapter 5), *July 2010.*

* 10+4 Buffer Alternative, consisting of 10 general purpose lanes plus 4 HOV lanes.

The existing freeway facility is at capacity during the peak periods; thus, the projected 30% increase in VMT on I-5 under the No Build Alternative can only be accommodated by extending the peak periods over a longer period of time. On most highways, peak-period congestion applies to a single direction of travel, such as a morning peak period heading into downtown or an afternoon peak period heading out of downtown. Southbound I-5, however**,** experiences two peak periods during the day. Current congestion occurs for an average of five hours a day in both the southbound and northbound directions. As shown in Table 5.1-3, during the off-peak (defined as non-commute times generally before 6:00 A.M., from 9:00 A.M.–3:00 P.M., and after 6:00 P.M.), it currently takes an average of 23–25 minutes to drive the 27 miles in either direction on I-5 between Harbor Drive at the north end of the corridor and La Jolla Village Drive at the south end. During the peak periods, average southbound travel time increases to 32 minutes in the afternoon and 44 minutes in the morning. Northbound average travel time increases to 39 minutes during the afternoon peak period. Currently, the corridor also experiences consistent southbound weekend congestion, resulting in a corridor travel time of up to 30 minutes, 5–7 minutes longer than free-flow travel times.[15] The peak-period congestion and travel-time degradation is compounded by the multi-purpose trip nature of this highway that serves not only high volumes of commute trips, but also recreational, regional, interregional, and short-distance local trips.

TABLE 5.1-3: 2006 TRAVEL TIME – HARBOR DRIVE TO LA JOLLA VILLAGE DRIVE (I-5 NORTH COAST CORRIDOR)

	Off-Peak Hours	AM Peak Hours	PM Peak Hours
Southbound	23–25 minutes	31–44 minutes	27–32 minutes
Northbound	24 minutes	24–25 minutes	35–39 minutes

Source: I-5 NCC Project Draft EIR/EIS (Section 1-3), June 2010.

By 2030 under the No Build Alternative, congestion will expand significantly as compared to the current conditions, to the extent that the entire length of the corridor in both directions is projected to experience severe congestion and traffic delay during the peak periods by 2030. In addition, if no improvements are made to I-5, forecasts indicate that the projected increases in average daily traffic (ADT) will extend the time duration of congestion in both the northbound and southbound directions. Currently, congestion lasts for 5 hours in both the northbound and southbound directions. By 2030, if no improvements are made to I-5, congested travel hours will more than double with northbound congestion forecast to extend to 9-10 hours and southbound congestion to extend to 13 hours.[16]

Congestion, particularly stop-and-go congestion, both decreases vehicle energy efficiency and increases vehicle hours traveled, leading to increased energy consumption. Fuel consumption increases by about 30% when average speeds drop from 30 mph to 20 mph, while a drop from 30 mph to 10 mph results in a 100% increase in fuel use. Studies estimate that approximately 10% of all on-road fuel consumed is a result of congestion.[17]

Despite the increase in VMT projected on I-5 under the I-5 NCC Project Build Alternative, as shown in Table 5.1-2, corridor project improvements are projected to reduce congestion and lead to a decrease in VHT, which would positively influence congestion-related vehicle emissions in the corridor.

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15 *I-5 NCC Project Draft EIR/EIS* (Section 1-4), June 2010.
16 *San Diego NCC–CSMP,* July 2010, I-5 North Coast Performance Measures Table, 6/16/2010.
17 *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007.

On a regional and system-wide basis, overall VMT and VMT per capita are both projected to decrease by 2030 with implementation of the transportation improvement projects included in SANDAG's 2030 Regional Transportation Plan (RTP). Table 5.1-4 shows the change in regional and per capita VMT from existing conditions to 2030. The regional analysis demonstrates the potential energy savings that can be derived from a system-wide, multi-modal approach to transportation improvements (combined with regional land use policies that concentrate growth in already developed areas) as identified in SANDAG's 2030 RTP and the adopted goals for the 2050 RTP currently under development. Proposed highway improvements include HOV (managed) lanes and direct access ramps, which are a key link in the regional multi-modal network. Given that approximately 10% of regional VMT occurs on I-5 in the NCC, these improvements are a significant contributor to the projected regional increase in HOV and transit mode share from 2008 to 2030. HOVs as a percentage of total vehicles on the road in the region are anticipated to increase from approximately 2% in 2008 to 7% by 2030, and are expected to be higher in the NCC due to the proposed managed lanes.[18] Regional transit mode share is relatively low as many parts of the region do not have transit service; however, peak-period commute trip transit mode share in the NCC is projected to increase from approximately 2% in 2008 to almost 8% by 2030.[19] SANDAG's initial 2050 RTP goal for transit mode share in the NCC is 10% to 15%.[20] Therefore, projections indicate that with the rail and highway improvements planned for the NCC, HOV and transit mode share will likely exceed 20% by 2030.

Fewer regional VMT combined with a larger regional HOV and transit mode share would thus translate into improved energy conservation and reduced energy consumption when compared to the No Build Alternative.

TABLE 5.1-4: REGIONAL VEHICLE MILES TRAVELED

	Existing (2008)	No Build (2030)	No Build Percent Change from Existing	2030 RTP: IncludesI-5 NCC Project*	2030 RTP Percent Change from No Build
Regional Daily VMT	84.9 million	116.1 million	36.7%	113.6 million	-2.2%
Regional Daily VMT/Capita	27.65	29.16	5.5%	28.54	-2.1%

Source: *2030 Regional Transportation Plan, Final Environmental Impact Report* (Table 7.0-7), November 2007.

* 10+4 Buffer Alternative, consisting of 10 general purpose lanes plus 4 HOV lanes

5.1.1.2 Air Pollution, Greenhouse Gases and Climate Change

Transportation, particularly motor vehicles, is a large source of pollutant emissions. Transportation (including cars, trucks, trains, planes, and ships) is also estimated to be responsible for 38% of California GHG emissions,[21] which have recently been acknowledged by the U.S. Environmental Protection Agency (EPA) as a subset of air pollution.[22] In 2007, the United Nations' Intergovernmental

18 *I-5 NCC Project Draft EIR/EIS* (Section 1), June 2010.
19 SANDAG Urban Area Transit Strategy Home-Based Work Trip Attractions Model Results by District; 2008 with Base Transit and 2030 Reasonably Expected and Unconstrained RTP scenarios with 2050 land uses; District 12 (North Coast Corridor).
20 SANDAG Joint Regional Planning and Transportation Committees Report, Agenda Item C, June 4, 2010, Attachment 12.
21 California Air Resources Board. Greenhouse Gas Emission Inventory.
22 US Environmental Protection Agency. Climate Change – Greenhouse Gas Emissions. http://www.epa.gov/climatechange/emissions/index.html

Panel on Climate Change observed that "changes in atmospheric concentrations of GHGs and aerosols, land cover and solar radiation alter the energy balance of the climate system," and that "increases in anthropogenic greenhouse gas concentrations is very likely to have caused most of the increases in global average temperature since the mid-20th century."[23] These changes in global climate may have potential impacts on coastal resources including rising sea level, increased coastal flooding and erosion, inundation of developed areas and public access and recreation areas, alterations to existing sensitive habitat areas, ocean warming, changes in marine species diversity, distribution, and productivity, and increased ocean acidification.

Like energy consumption, air pollution and GHGs are generally monitored and measured on a regional basis. Global climate change is a cumulative impact resulting from many years of technological and societal changes. While individual transportation projects may have incremental contributions to GHG emissions, they generally do not create enough GHG emissions to significantly affect global levels.

For the San Diego region, the San Diego Air Basin (SDAB), located in the southwestern corner of California and comprising all of San Diego County, provides the basis for measuring and monitoring air pollutants. The SDAB, which is 4,260-square-miles and includes 2.9 million residents, accounts for approximately 7% of the state's criteria-pollutant emissions. The majority of the population and emissions are concentrated in the western portion of the basin. Despite a growth in population of more than 50% and a doubling of VMT over the past 20 years,[24] overall air quality in the SDAB has improved, reflecting the benefits of cleaner vehicle technology.

The California Air Resources Board establishes thresholds for pollutants and emissions in the SDAB and monitors and reports the region's attainment or non-attainment of the thresholds. Attainment status for criteria pollutants in the SDAB is shown in Table 5.1-5.

TABLE 5.1-5: SAN DIEGO AIR BASIN ATTAINMENT STATUS

	Federal	State
Ozone – 8 hr	Nonattainment – Basic	Nonattainment
Carbon Monoxide	Attainment/Maintenance	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
$PM_{2.5}$	Attainment	Nonattainment
PM_{10}	Attainment	Nonattainment

Source: I-5 NCC Project Draft EIR/EIS (Section 3-14), June 2010 from *California Air Resources Board, 2006*

The basin is affected by locally produced emissions as well as those from other areas. Ozone (O_3) and its precursor emissions originate in the South Coast Air Basin (north of San Diego) and from Mexico to the south. Implemented controls have resulted in a downward trend in O_3 levels and its precursors. On November 15, 2001, the SDAB became eligible for redesignation as an attainment area, spending nearly three years in compliance with the former federal 1-hour O_3 standard. On July 28, 2003, the EPA formally redesignated the SDAB as an O_3 attainment area, and a maintenance plan was approved. On April 15, 2004, the EPA issued the designations for the 8-hour O_3 standard, and the SDAB was

[23] Climate Change 2007: Synthesis Report – Summary for Policy Makers. Intergovernmental Panel on Climate Change. 17 November 2007. http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf

[24] *LOSSAN Final Program EIR/EIS*, September 2007.

classified as "basic" nonattainment, the least severe of the six degrees of O_3 nonattainment (EPA 2007). Currently, the SDAB is classified as a state "serious" O_3 nonattainment area.[25]

Carbon monoxide (CO) concentrations in the SDAB decreased approximately 56% from 1981 to 2000. As a result, the federal CO standards have not been exceeded since 1989, and the state standard has not been exceeded since 1990. The SDAB falls under a federal "maintenance plan" for CO following a 1998 redesignation as a CO attainment area. With continuing enforcement of motor vehicle regulations, the air basin will likely maintain its attainment status for both federal and state standards.[26]

Pollutant burden levels of CO and nitrogen dioxide (NO_x) are predicted to decrease statewide through 2020 compared to current levels due to implementing stringent standards, control measures, and state-of-the-art emission control technologies.

The SDAB is a state nonattainment area for $PM_{2.5}$ and PM_{10}. Direct emissions of PM_{10} in the SDAB increased 69% from 1975 to 2000 and are forecast to increase an additional 7% by 2010. The increase can be attributed to growth in area-wide source emissions, mainly dust from vehicles on paved and unpaved roads, construction and demolition operations, and particulates from residential fuel combustion. This growth reflects the increase in regional population and VMT. PM_{10} emissions from stationary sources are also expected to increase slightly in the future because of industrial growth. Although the SDAB is designated as nonattainment for the state ambient air quality standard for $PM_{2.5}$ and PM_{10} it is in attainment for the national standard for both $PM_{2.5}$ and PM_{10}.[27]

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05 establishing California GHG emission reduction targets. In 2006, these goals were reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, requiring reducing GHG emissions to 1) 2000 levels by 2010; 2) 1990 levels by the 2020; and 3) 80% below the 1990 levels by the year 2050. In 2008, Senate Bill 375 (SB 375) passed, providing a means for achieving the AB 32 goals for cars and light trucks. SB 375 requires the California Air Resources Board to develop regional GHG emission reduction targets for 2020 and 2035 and to review each region's determination that its plan achieves those targets. Regional metropolitan planning organizations are required to include a sustainable communities' strategy in their RTP that seeks to achieve these targeted reductions in GHG emissions. SANDAG is preparing its 2050 RTP, targeted for adoption in 2011, accordingly. The 2050 RTP includes a Sustainable Communities Strategy, which must demonstrate how development patterns and the transportation network, policies, and programs will work to achieve the region's GHG emission reduction targets. Caltrans acknowledged the need to develop energy efficient projects in the Director's Policy on Energy Efficiency, Conservation and Climate Change (June 2007), which states that Caltrans "incorporates energy efficiency, conservation, and climate change measures into transportation planning, project development, design, operations, and maintenance of transportation facilities, fleets, buildings, and equipment to minimize use of fuel supplies and energy sources and reduce greenhouse gas (GHG) emissions."

LOSSAN Rail Corridor

The overall growth in the number of trains and locomotives on the LOSSAN rail corridor described above will contribute to air emissions in the SDAB; however, agreements between operators and regulators will provide locomotive fleet emission improvements in California 20 years ahead of the rest of the country. It is anticipated that innovations in low-emissions locomotive technology through and

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25 *Draft Air Quality Analysis for the I-5 North Coast Corridor Project*, August 2007.
26 *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007.
27 *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007. *I-5 NCC Project Draft EIR/EIS* (Section 3-14), June 2010.

beyond 2030 will result in cleaner locomotives operating in the corridor as existing locomotives reach the end of their useful life and are replaced by new, more efficient models, and new locomotives are acquired to accommodate the passenger and train growth in the rail corridor. But even with lower emission locomotives, emissions will increase as rail corridors become more congested. Bottlenecks caused by single-track sections on the LOSSAN corridor (just over half of the NCC LOSSAN corridor) result in locomotive idling as trains wait along passing tracks, and at-grade crossings in urban areas require speed reductions. These factors decrease the efficiency of locomotive travel and increase emissions. Relieving track congestion by enhancing operations and improving travel times in high-congestion rail travel corridors would lead to an overall reduction in air pollutant emissions, including GHG emissions.

I-5 Highway Corridor

Within the San Diego region, on-road transportation contributes 46% of GHG emissions due to lower levels of other contributors such as industrial and agricultural sources. On-road transportation's contribution to GHG emissions is dependent on several main factors including the types of vehicles on the road (fleet mix); the type of fuel the vehicles use (fleet mix); and the time (VHT), distance (VMT), and efficiency (congestion) that the vehicles travel (see Figure 5-1). While some strategies to reduce GHG emissions, such as improved fuel economy and new fuel and vehicle types, will be determined at the state, national, or global levels, others will be implemented at the local level, like improving efficiency and reducing demand on the transportation system.

Caltrans has developed a Climate Action Program to promote, facilitate, and coordinate implementing climate change strategies and related activities within Caltrans and partner agencies. One of the main strategies of the Climate Action Program is to make California's transportation system more efficient. The highest CO_2 levels (from mobile sources such as automobiles) occur at stop-and-go speeds of 0–25 mph and speeds over 55 mph (automobiles are most efficient when operating at steady speeds).[28] GHG emissions are typically measured in terms of pounds or tons of "carbon dioxide equivalent" (CO_2E), and thus, CO_2 emissions from a project provide a proxy measurement for GHG potential.[29] The effects of transportation congestion on air emissions, including GHG emissions, can be substantial.

5.1.2 TREP/PWP Concerns

Environmental documentation and analysis prepared for the proposed rail and highway corridors improvements indicate that energy use and the emission of some air pollutants in the corridors are expected to increase whether corridor transportation improvements are constructed or not, as a result of regionally projected population, employment, and travel growth in the corridor.[30] Increases in energy consumption, air pollutants, and GHG emissions from rail and highway improvements could occur from the locomotives and vehicles using the proposed transportation facilities, particularly if highway improvements promote or encourage more vehicle trips in the corridor by increasing highway capacity and reducing congestion. Proposed TREP/PWP improvements could also individually or cumulatively affect energy use, air quality, and GHG emissions due to short-term project construction.

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28 *I-5 NCC Project Draft EIR/EIS* (Section 3-14), June 2010.
29 California Climate Action Registry. January 2009.
30 *LOSSAN Final Program EIR/EIS* (Sections 3-3 and 3-5), July 2010; *I-5 NCC Project Draft EIR/EIS (Sections 3-14, 3-16)*, June 2010.

5.1.2.1 LOSSAN Rail Corridor Impact Assessment

Energy

By 2020, the combined increase in passenger and freight locomotive rail miles in the corridor is estimated to be 66% above 2005 levels[31] leading to a corresponding increase in direct energy use associated with the LOSSAN rail corridor improvements; however, this assessment is based entirely on locomotive miles and does not consider energy used per person transported, the fuel efficiency of the trains at different speeds, impacts of locomotive idling, or potential mode shifts from private automobile to rail. The projected growth in rail passengers and the ability to reduce train idling and maintain steady speeds are dependent on the LOSSAN rail corridor improvements. Energy consumption associated with constructing the LOSSAN rail corridor track, station, and support facility improvements would result in one-time, non-recoverable energy costs associated with construction. Given the scope and scale of the improvements proposed, it is anticipated that the construction-related energy requirement would be substantial.[32]

Air Quality and Greenhouse Gas Emissions

As with energy consumption, improvements and expanded capacity in the LOSSAN rail corridor would lead to growth in locomotive miles, and therefore pollutant and GHG emissions directly attributable to rail miles traveled. Pollutants would generally be expected to increase in direct proportion to the growth in locomotive miles. Program level analyses for the LOSSAN corridor (which extends from San Luis Obispo to San Diego) indicate that improvements along this entire corridor could lead to emissions that exceed daily air quality thresholds for NOx and, potentially, for other pollutants. In addition, the program-level analysis indicates that locomotives will emit 74% more GHGs in 2020 than they did in 2005.

However, locomotive emissions for future periods are likely overstated because they do not account for the expected change to a cleaner locomotive fleet and more efficient, less congested operations on the rail corridor resulting from project improvements. While the individual projects in the rail corridor, or the entire program of rail corridor improvements, are unlikely to significantly affect global levels, the projects' incremental contributions should be addressed.[33]

Conversely, increased service levels on the rail corridor could lead to increased auto emissions. More service on the corridor will require more frequent waits at at-grade railroad crossings for autos.[34] In addition, passenger increases anticipated as a result of LOSSAN rail corridor improvements would lead to more traffic around stations as riders access station park-and-ride facilities or get dropped off at stations. Both of these "secondary" impacts from rail corridor improvements could increase vehicular emissions in localized air quality hotspots, at grade crossings, and around stations. [35]

Constructing the proposed rail improvements would cause temporary increases in pollution burdens in the project area. Emissions sources would include diesel-powered construction equipment, workforce travel to and from the project site, and fugitive dust from construction activities. Implementing the LOSSAN rail corridor improvements would be done incrementally over many years; therefore, potential

[31] *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007.
[32] *LOSSAN Final Program EIR/EIS* (Section 3-5), September 2007.
[33] *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007.
[34] *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007.
[35] *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007.

for cumulative impacts to the SDAB would be reduced as projects would be spread out both geographically and over time.[36]

5.1.2.2 I-5 Highway Corridor Impact Assessment

Energy

The proposed improvements on I-5 present both impacts to and benefits for energy consumption. On one hand, the improvements are projected to result in an 8% increase in daily VMT over the No Build Alternative, which leads to more energy consumption on I-5. On the other hand, the congestion reduction benefits that result from these improvements would lead to more fuel efficient travel because of reductions in VHT during the most congested peak periods, greatly off-setting the impacts of additional VMT on I-5 (see Figure 5-2).

Project-induced VMT increases on I-5 relate to vehicle VMT and not person VMT. In other words, the proposed managed lanes on I-5 are expected to encourage an increase in carpools and vanpools in the corridor, resulting in more people per vehicle traveling through the corridor. This likely increase in person trips greater than the increase in VMT (8% over the No Build Alternative) would therefore result in lower energy consumption per person trip. The ability to increase person-carrying capacity in the corridor would improve access to coastal and other recreational use areas at a lower energy requirement per person than under existing conditions or the No Build Alternative.

Analyses conducted for the 2030 RTP indicate that regionally, 2030 VMT per capita (28.54 VMT/capita) will be lower with the transportation improvements identified in the RTP, which includes the NCC project improvements, than under a No Build Alternative (29.16 VMT/capita).[37] Achieving region-wide VMT reductions is a result of SANDAG's multi-modal managed lanes strategy, and underscores the role and contributions of the NCC highway improvements to the success of the regional transportation system in achieving goals that lead toward lower VMT. Regional reduction in VMT is a primary indicator of reductions in energy consumption.

Construction activities such as the use of heavy machinery, detours, lane closures, the import and export of materials and equipment, and other activities could substantially increase energy consumption, and would be unavoidable impacts under any Build Alternative. I-5 highway corridor barrier alternatives could require a slightly higher consumption of energy due to increased maintenance activities, specifically sweeping and trash collection.[38]

Air Quality and Greenhouse Gas Emissions

The I-5 highway corridor improvements are included in the 2030 Revenue Constrained Regional Transportation Plan and 2008 Regional Transportation Improvement Program, which were found to conform with regional, state, and federal air quality standards by SANDAG, the FHWA and the FTA; therefore, the program of projects conforms with the State Implementation Plan (SIP), and there is no regional air quality impact.

As this conformity analysis is conducted for the region, it does not include an analysis of local CO or Mobile Source Air Toxins (MSATs) at the project level. Although emissions are predicted to increase concurrent with the increase in VMT on I-5, detailed CO hotspot analysis completed for the region, which included select intersections in the NCC, concludes that the proposed project's future traffic

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36 *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007.
37 *2030 San Diego Regional Transportation Plan, Final Environmental Impact Report*, November 2007.
38 *I-5 NCC Project Draft EIR/EIS* (Section 3-16), June 2010.

conditions would not exceed federal and state 1- or 8-hour standards for CO during the AM or PM peak periods at any of the analyzed intersections.[39] All other intersections in the project area are predicted to experience less delay time and improved operating conditions. As a result, the proposed project would not result in or contribute to any significant local air quality impacts due to future operations and is considered to be satisfactory for local CO impacts.[40]

Based on the federal and state guidance for analysis of particulate matter, the improvements to I-5 are not defined as a project of air quality concern as the project seeks to relieve congestion, improve operations, and provide better circulation.[41]

Modeling of six MSAT emissions for the I-5 project indicates a substantial decrease in emissions of these toxins between existing conditions and 2030 for both the No Build and the proposed Build Alternatives. The proposed Build Alternatives would result in a slight increase in VMT on I-5 when compared to the No Build Alternative; however, the No Build Alternative would accommodate fewer vehicles, including HOVs and BRTs, thereby increasing congestion and resulting in a breakdown of travel speeds and increased emissions caused by the idling vehicles. The proposed Build Alternative would reduce congestion and travel time and associated air emissions otherwise caused by idling vehicles.[42]

Any increases in air pollutant emissions associated with the project will include corresponding increases in CO_2 and other emitted GHGs. While it is roughly estimated that GHG emissions would increase at a rate similar to I-5 VMT increases, this does not take into account the off-setting corridor VMT reductions that result from vehicles moving from other north-south parallel arterial routes in the corridor (such as Coast Highway and El Camino Real) onto the freeway as travel on I-5 becomes more efficient. [43]

Neither the EPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on the FHWA's climate change website,[44] climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. The four strategies set forth by the FHWA to lessen impacts correlate with efforts that the state has undertaken and is undertaking to deal with transportation affects on GHG emissions and climate change; the strategies include improved transportation system efficiency (such as higher vehicle occupancy), cleaner fuels, cleaner vehicles, and reduction in the growth of VHT. The I-5 NCC Project improvements are projected to result in a reduction in peak period VHT (see Table 5.1-2).

5.1.3 TREP/PWP Opportunities, Design/Development Strategies, and Policies/Implementation Measures

As discussed in Section 5.1.1, implementing the proposed rail and highway transportation projects in the NCC would result in more VMT on I-5; however, the increased VMT would be all or partially offset by the operational and travel improvements gained from the improved rail and new managed lanes facilities, including lower VHT (i.e., fewer idling trains and congested hours of highway travel) and shifts

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39 Intersections where CO concentration hotspot modeling results are provided include: Palomar Airport Road and I-5 access ramps; Genesee Avenue and I-5 access ramps; and, Del Mar Heights Road and I-5 access ramps.

40 *I-5 NCC Project Draft EIR/EIS* (Section 3-14), June 2010.

41 *Transportation Conformity Guidance for Qualitative Hot-Spot Analysis in PM10 and PM2.5 Non-Attainment and Maintenance Areas*. USEPA and FHWA, as cited in *I-5 NCC Project Draft EIR/EIS* (Section 3-14), June 2010.

42 *Draft Air Quality Analysis for the I-5 North Coast Corridor Project*, August 2007.

43 *San Diego NCC–CSMP,* July 2010.

44 http://www.fhwa.dot.gov/hep/climate/index.htm

to HOV travel (carpools and transit), which result in more person-carrying capacity in the corridor than would be possible under either the No Build Alternative or a traditional highway expansion project.

The TREP/PWP program of multi-modal transportation enhancements would maximize public access to the coast and recreation areas by providing alternative transportation options (such as transit, HOV facilities, pedestrian trails and bike paths) that efficiently and effectively accommodate more person trips in the corridor while minimizing energy, air quality and GHG impacts, particularly impacts per person trip, than will occur under the No Build Alternative.

5.1.3.1 LOSSAN Rail Corridor Opportunities

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:

- Double-track projects to reduce and eliminate single-track segments to increase capacity and reliability, and reduce travel time.
- Trackwork improvements such as stub tracks, layover tracks, and track cross-overs to improve operations and reliability.
- Bridge replacements to improve the safety of existing services.
- Expansion of parking at rail stations to enhance access.
- Fund additional transit connections that encourage alternatives to parking at rail stations.

The planned improvements would:

- Allow the COASTER to operate with 20-minute peak-period frequency, which would result in as many as 54 trains per day versus the 26 trains per day under existing conditions (including weekend and off peak service).
- Make it easier and more convenient for park-and-ride passengers to access stations.
- Increase COASTER ridership from 6,000 to 12,900 a day with capacity to accommodate 20,000 passengers a day, which would equate to approximately one lane of traffic being diverted off I-5 during the peak period.[45]

In addition to infrastructure and operational improvements along the rail corridor, the NCC project contains more than a dozen planned and potential Smart Growth areas (as designated by SANDAG on the July 2008 Smart Growth Concept Map), located at each of the LOSSAN rail corridor stations, with the exception of Sorrento Valley Station. Implementing proposed improvements in the LOSSAN rail corridor presents multiple opportunities to reduce energy use and improve air quality. New infrastructure would reduce delays and therefore reduce energy consumption and emissions from idling locomotives. Investment in the rail corridor would enable increased frequencies and reduced travel times, which, along with Smart Growth development at stations, would be expected to more than double ridership on LOSSAN rail corridor passenger services between 2008 and 2030. Higher rail ridership would mean fewer automobile trips in the corridor and corresponding decreases in auto energy consumption and emissions. While an increase in locomotive miles would lead to an increase in

[45] Assume: 20,000 rider capacity for LOSSAN corridor; 75% of rail trips will be during the 6 hour peak periods (20 min frequency during the peak, 60 minute frequency during off-peak); 2,100 cars per hour per lane capacity; 1.2 average automobile occupancy.
Calculation: 20,000 * 0.75 = 15,000 rail trips during peak period; 15,000/6 = 2,500 rail trips per hour; 2,500/1.2 = 2,083 car trip equivalent; 2,083/2,100 ≈1 lane of traffic

overall energy use and associated air emissions, reductions in train idling time as well as a shift in mode share from single-occupancy vehicles (SOVs) to commuter and intercity rail would partially offset such growth. In addition, improvements in locomotive air pollution controls and new lower-emission, high-efficiency vehicles would result in continued reductions of pollutant emissions and energy use.

5.1.3.2 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements shall minimize energy consumption and be consistent with San Diego County Air Pollution Control District and California Air Resources Board requirements. Project-level analysis for proposed rail improvements shall not occur, however, until after project alternatives are chosen; preliminary design, engineering, and resource impact analyses are developed; and mitigation measures and monitoring plans are prepared; therefore, analysis of the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary resource impact assessment, and design and development strategies to address potential resource impacts. The following design and development strategies provide guidance in addressing potential resource impacts for specific rail development projects. As proposed rail improvement plans are further developed, additional design and development strategies to address potential impacts to energy, air quality, and GHG emissions would be evaluated by the lead agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. Project-level analysis of potential energy and air quality impacts from rail improvements should confirm proposed rail improvements will avoid substantial increases to energy use or emissions, as appropriate. Should project-level analysis find that previously unidentified permanent or temporary increases to energy use or emissions would result from proposed rail improvements, additional study and implementation of feasible avoidance and/or mitigation measures will ensure project consistency with applicable Coastal Act policies.
2. Where feasible, LOSSAN corridor design should minimize grade changes in steep terrain areas to reduce the use of diesel fuel.[46]
3. LOSSAN corridor construction should be subject to a construction energy conservation plan, where feasible.
4. Best Management Practices for project-level emissions mitigation for LOSSAN corridor improvements should be implemented to address the potential for regional and localized impacts.

5.1.3.3 I-5 Highway Corridor Opportunities

Addressing energy, air quality, and GHG emissions in the NCC while also accommodating the projected growth in travel demand and achieving better coastal access requires a comprehensive approach to the transportation system. As discussed in Chapter 3, the strategy to maintain mobility and access in the NCC includes a multi-modal transportation program that both accommodates projected growth, including the large volumes and diversity of trips in the corridor, and encourages alternatives to SOV travel. While rail improvements provide one component of the multi-modal system, the multi-modal transportation approach also has its foundation in SANDAG's regional highway strategy, detailed in the RTP, which focuses on a system of managed lanes throughout the region. The proposed NCC highway improvements would incorporate these multi-modal opportunities by providing managed lanes and highway-capacity improvements that would:

[46] For the LOSSAN rail corridor: The road program-level analysis led to measures to reduce the amount of energy consumed. If the proposed improvements were implemented, the project-level analysis and design would be evaluated for the feasibility of incorporating these measures.

- Primarily accommodate carpools, bus rapid transit (BRT), and vanpools that move more people, not necessarily more vehicles.
- Reduce congestion and travel delays, providing free-flow travel, particularly on the managed lanes, which, in turn, reduce VHT and emissions.
- Encourage carpooling, vanpooling and transit use by providing the appropriate facilities to reduce delays and make these alternatives modes more time competitive with driving on highway general-purpose lanes.

5.1.3.4 I-5 Highway Policies and Implementation Measures

In addition to the opportunities presented by the proposed highway corridor opportunities discussed above, Caltrans would implement the following policy and implementation measures to ensure that proposed improvements are designed, implemented, and maintained to reduce energy use, improve air quality, and minimize GHG emissions. Notice of Impending Development (NOID) submittals for highway, community, and resource enhancement project implementation that would potentially affect energy, air quality, and GHG emissions, as discussed in this section, would demonstrate compliance with the following policy and implementation measures.

Policy 5.1: New highway and associated community and resource enhancements shall seek to minimize increases in energy consumption, VHT, and person hours of travel, and be consistent with San Diego County Air Pollution Control District and California Air Resources Board requirements. Where new development may potentially increase energy consumption or be inconsistent with air pollution requirements, appropriate mitigation measures shall be required and implemented as discussed below.

Implementation Measure 5.1.1: Mitigation measures to minimize temporary construction impacts such as the emission of fugitive dust, PM_{10}, and $PM_{2.5}$, should be implemented including:

- San Diego Air Pollution Control District (SDAPCD) Rule 51
  - Minimize land disturbance.
  - Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas.
  - Suspend grading and earth moving when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes.
  - Cover trucks when hauling dirt.
  - Stabilize the surface of dirt piles if not removed immediately.
  - Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
  - Minimize unnecessary vehicular and machinery activities.
  - Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
  - Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.
  - Remove unused material.
- Caltrans Specification Section 10: Dust Control

- Locate construction equipment and truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density.

Implementation Measure 5.1.2: During I-5 improvement construction, measures should be implemented to minimize energy consumption during construction, including:

- Public awareness campaigns to encourage carpooling and commuting during non-peak traffic hours
- Recycling materials such as damaged metal beam/guardrail and used rebar salvaged as metal scrap.
- Using recycled materials, such as asphalt and concrete roadway materials, through creating road-base materials after crushing and grinding.

Implementation Measure 5.1.3: Roadway system efficiency should be improved by better managing the region's transportation resources and traveler information in order to minimize congestion, improve reliability and safety, and enhance the overall productivity of the transportation system by implementing the following measures:

- Placing Intelligent Transportation System (ITS) informational gathering systems, such as closed-circuit television cameras and loop detectors, in order to gather, process, and disseminate information to the transportation system users. System improvements would be planned and installed in coordination with Caltrans design and landscape personnel to ensure the improvements would not adversely impact significant coastal resources or views.
- Including electronic communications, such as ramp meters, changeable message signs, and "511" – call in and web traveler service. Ramps meters and signs would be planned and installed in coordination with Caltrans design and landscape personnel to ensure the improvements would not adversely impact significant coastal resources or views.
- Providing incident responders such as Freeway Service Patrol to reduce traffic congestion by efficiently removing disable vehicles from the freeway, decreasing the potential for additional incidents caused by onlookers or the resulting stop-and-go traffic.

Implementation Measure 5.1.4: The project design of the I-5 North Coast Corridor should include greening and resource conservation, including:

- When removing existing highway lighting and traffic signals as part of construction, where feasible they will be replaced with energy efficient models and LED traffic signals.
- Encouraging the use of innovative technologies to reduce the amount of cement (production is very energy intense) used in pavements and bridges, and yet have stronger, longer-lasting concrete.
- Incorporating sustainable landscaping and utilizing reclaimed water for irrigation where reclaimed water is available.

5.1.4 Coastal Act Consistency

Coastal Act Section 30253 provides for consistency with air pollution requirements and the minimization of energy consumption and vehicle miles traveled:

> New development shall do all of the following:

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.

(4) Minimize energy consumption and vehicle miles traveled.

The Coastal Act requires that designing, implementing and operating new development within the coastal zone minimize energy consumption and vehicle miles traveled and that new development be consistent with air quality requirements, which includes restrictions on GHG emissions.

Growth in NCC population, employment, and travel is anticipated to occur whether highway and rail corridor improvements are made or not. In fact, almost 75% of the projected growth in VMT on I-5 from 2008 to 2030 under the Build Alternative would occur even without the project (see Table 5.1-2). The energy consumption and air emissions associated with the incremental growth in VMT with the project would be partially offset by fewer VHT from less congestion and stop-and-go travel. The HOV travel that would occur with the rail and managed lanes improvements would also lead to less VMT per person trip (i.e., more people carried per vehicle mile). This would enhance the energy and air quality efficiency of improved access and mobility in the corridor.

5.1.4.1 LOSSAN Rail Corridor Consistency Analysis

Proposed rail improvements would allow for increased passenger rail service in the corridor to accommodate projected passenger demand and improve the attractiveness of rail as an alternative to SOV travel in the corridor. Increased passenger service would increase locomotive miles, which, with existing technology, would lead to an overall increase in energy consumption and emissions of criteria pollutants and GHGs; however, the combination of projected higher ridership due to more frequent and faster service, fewer congestion related delays, and less train idling, with cleaner, more energy efficient locomotives would help offset energy consumption and emissions in the rail corridor that result from higher rail VMT. Continued improvements in locomotive air pollution controls, along with the anticipated Tier 3 standards (the EPA's emission standards for non-road diesel engines) would result in continued reductions of pollutant emissions per mile of locomotive travel. Additionally, while each SOV trip incrementally adds more VMT and energy use, the number of projected trains (frequency of service) in the corridor would generally stay constant as rail person trips increase up to passenger capacity thresholds (20,000 trips per day with the project), resulting in decreases in expended energy and produced emissions per person trip as rail use increases to fill available capacity.[47] The LOSSAN rail corridor improvements would also be consistent with the California Energy Plan, which encourages reducing transportation-related energy needs by including efficient public transportation. Improvements to public transit infrastructure have been found to be consistent with Coastal Act Section 30253 as they encourage the use of a more efficient mode of transportation.

More frequent, fast, and reliable rail service in the corridor could lead to public support and demand for denser housing or other development around LOSSAN rail corridor stations, as planned for in SANDAG's adopted Smart Growth policies and Concept Map. Such development would allow for residents and other travelers to increase their use of rail services in the corridor, as well as increase walk and bike modes for local trips. This activity would further reduce VMT, VHT, energy use and air emissions. This concept is elaborated in Section 5.2: Public Transit and Smart Growth.

[47] The energy and emissions reductions per person trip would occur for all transportation modes that increase occupancy per vehicle, including buses and carpools.

Overall, the improvements to the LOSSAN rail corridor would result in beneficial reductions in energy use and emissions, including GHGs, in localized areas (as well as the entire I-5 highway corridor) by increasing rail ridership and decreasing rail congestion and associated locomotive idling along the corridor and at existing stations. Regional air quality would be improved by encouraging SOV trips to shift to the LOSSAN rail corridor; however, energy and air emissions mitigation during construction and operation and/or continued improvement in the locomotive fleet would remain important to ensure that rail improvements would not individually or cumulatively result in significant adverse air quality impacts in the study area.

As project-level information and project-specific environmental review has not yet been completed for the proposed rail improvements, design and development strategies require that future project-level analysis for potential energy use, air quality and GHG emissions impacts confirm that proposed rail improvements would minimize energy consumption and be consistent with air pollution requirements for the state and region where feasible. Additional study of avoidance and mitigation measures is to be conducted to ensure project consistency with applicable Coastal Act policies should previously unidentified permanent or temporary project increases in energy consumption or air quality impacts are determined during any future, project-specific Federal Consistency review process.

5.1.4.2 I-5 Highway Corridor Consistency Analysis

The proposed I-5 managed lane system would prioritize HOV and transit use, maximizing corridor person throughput while reducing VHT and VMT per person trip. Improvements to the I-5 highway corridor would encourage the use of carpools, vanpools and transit, including planned BRT service in the corridor, by providing uncongested, free-flow facilities for these modes. Greater use of HOVs would lead to less energy consumption and air emissions per person trip. In addition, since energy consumption and emissions would increase as congestion increases, reduced congestion and resulting reductions in VHT in the corridor would have positive benefits for energy use and air quality. Because most (approximately 75%) of the growth in VMT on I-5 would occur even without the highway improvements and these improvements both encourage HOV use and reduce congestion, much of the energy and emissions impacts from incremental project increases in VMT would be offset by higher vehicle occupancy and more efficient travel on the highway.

In addition to providing facilities for HOV and transit vehicles, SOVs would be allowed to access the managed lanes for a fee, which would vary (the more congestion on the managed lanes the higher the SOV cost to use them) to ensure the lanes stay congestion free. This would have multiple energy use benefits. Profits from these fees would be invested in corridor public transit services, increasing transit's competitiveness as an option for travel in the corridor. Also, charging fees to SOVs using the managed lanes would ensure use of the facility when capacity exists. There may be times when excess capacity would exist on the managed lanes while the main lanes are congested. By allowing some SOVs into the managed lanes for a fee, congestion on the main lanes—and corresponding energy use and emissions—would be reduced without negative affects to the HOV and transit users of the managed lanes. Technology, such as intelligent transportation systems, electronic communications, and incident response systems, would further improve corridor efficiency and reduce congestion and idling as required by Implementation Measure 5.1.4. Design provisions would also ensure reduced energy usage and emissions, including more energy-efficient lighting, reduced cement and increased recycled material pavement, and sustainable landscaping. Additional auxiliary and managed lanes, new and expanded park-and-ride facilities, improved bike lane and sidewalk features, ramp metering, and an improved transit-highway interface would likely improve traffic conditions and encourage

alternative transportation modes, and thus reduce energy consumption and emissions, as more people carpool or choose other modal options.

By accommodating current and projected growth in traffic demand on the existing highway facilities, indirect and inefficient routing would be reduced. As highway congestion grows, drivers are more likely to take alternative routes, using local arterials that are often circuitous and lead to higher VMT. Additionally, travel on the established, high-volume route would reduce potential impacts on local communities and coastal access from those trying to avoid highway congestion by using local arterials, including localized air quality impacts. By providing sufficient capacity to control congestion, out-of-direction travel would be minimized, as would be pressure to construct new or larger transportation corridors in local communities and undeveloped areas.

Many of the community enhancements planned as part of the highway project in the corridor would connect regional and local bicycle and pedestrian routes and thereby make them viable travel modes for many corridor trips. Bicycle and pedestrian trips require virtually no energy and have zero emissions. Bicycle and pedestrian connection enhancements would include:

- City of San Diego
  - Peñasquitos Creek trail connection
  - Carmel Valley bicycle/pedestrian trail connection
  - Pedestrian overpass north of Del Mar Heights Road
- City of Encinitas
  - Manchester Avenue pedestrian bridge and trail
  - Villa Cardiff Drive improvements
  - Hall Property Park Trail connecting to Santa Fe Drive
  - Trail connecting Santa Fe Drive to Requeza Street
  - Trail connecting Requeza Street to Encinitas Boulevard
  - Union Street pedestrian overpass and trail connection
- City of Carlsbad
  - Trail on east side of I-5 at Batiquitos Lagoon
  - Trail on west side of I-5 at Agua Hedionda Lagoon
  - Trail on the east side of I-5 at Agua Hedionda Lagoon
- City of Oceanside
  - Pocket park and pedestrian access at California Street
  - Oceanside Boulevard pedestrian streetscape enhancement
  - Enhancements to Division Street overpass
  - Enhanced pedestrian overpass connection on Mission Avenue
  - Enhanced pedestrian overpass connection on Bush Street
  - Pedestrian underpass improvements at San Luis Rey River

Additionally, local roads cross the I-5 highway corridor at 37 locations within the travel shed. Many of these crossings do not have standard bicycle and pedestrian facilities and therefore do not facilitate non-motorized modes crossing the freeway. As overcrossings are rebuilt and undercrossings implemented as part of the I-5 project, pedestrian and bicycle facilities would be upgraded. Sidewalks on 26 of these crossings would be 10- to 12-feet wide along the side of the street. Sidewalks would be

at least 17-feet wide at five crossings: California Street, Brooks Street, Mission Avenue, Bush Street (Oceanside), and MacKinnon Avenue (Encinitas). These enhanced crossings would improve access to schools and parks, and between the inland and coastal areas of I-5. Table 5.1-6 shows the current status and plan for pedestrian and bicycle crossings over I-5.

TABLE 5.1-6: PEDESTRIAN AND BICYCLE ENHANCEMENTS ACROSS I-5

Facility Type	Existing Bicycle Facilities	Future Bicycle Facilities	Existing Pedestrian Facilities	Future Pedestrian Facilities
Non-Standard	35	11	22	6
Standard	4	27	15	26
Enhanced	0	1	0	5

Source: San Diego NCC – CSMP (Chapter 7), July 2010.

While construction of the proposed transportation improvements would require significant energy consumption and result in additional emissions, long-term post-construction operational benefits of the transportation system (e.g., highway and pedestrian facilities) should be less than if no improvements are made. The long-term savings in operational energy requirements from reduced congestion-related fuel consumption, out-of-direction travel, higher vehicle occupancy, and more trips made by walking and biking would offset construction energy requirements.[48] Energy use and emissions from constructing highway improvements are addressed in Implementation Measures 5.1.1 and 5.1.2. By seeking to accommodate existing and planned demand through more efficient modes while addressing the existing land use constraints and topographical barriers, improvements within the I-5 highway corridor, combined with those in the LOSSAN rail corridor, are consistent with Coastal Act Section 30253, as they seek to maximize person throughput while minimizing the level of energy use and emissions per person mile traveled.

The impact of the improvements on GHG emissions would be similar to criteria pollutants. While increases in GHGs would be expected to occur with increased use of the LOSSAN and I-5 corridors, the proposed transportation improvements would also decrease congested-related delays and idling along these corridors, offsetting some of that increase. In addition, these improvements would increase the person-carrying capacity in the corridor, improving coastal access and mobility while reducing the per person energy use and corresponding air pollution emissions. Further, continued improvements in air pollution controls, new reduction technologies, and older fleet replacement with newer more efficient models will result in continued reductions of pollutant emissions per mile traveled.[49]

Increasing traffic congestion under the No Build Alternative would result in conditions inconsistent with the air quality policies of the Coastal Act because they would exacerbate non-attainment status of the SDAB. Implementing the TREP/PWP would include construction-phase BMPs to ensure project consistency with requirements of the regional air pollution control district or the State Air Resources Board.

Based on available project and environmental data and the policies and implementation measures included herein, the proposed TREP/PWP improvements would minimize energy consumption and VMT and would be consistent with requirements of the San Diego County Air Pollution Control District

[48] *I-5 NCC Project Draft EIR/EIS* (Section 3-16), June 2010.
[49] *LOSSAN Final Program EIR/EIS* (Section 3-3), September 2007; *I-5 NCC Project Draft EIR/EIS* (Section 3-14), June 2010.

or the California Air Resources Board. This would be achieved by focusing expected natural growth in travel on modes other than SOVs and by applying reasonable mitigation measures, and therefore the TREP/PWP is consistent with Section 30253 of the Coastal Act. Relative to the No Build Alternative, the TREP/PWP improvements would provide energy, air pollutant, and emissions benefits by reducing overall congestion and encouraging transit and carpool use.

5.1.5 Local Coastal Program Consistency

Appendix A includes detailed policy consistency analysis matrices for each certified local coastal program (LCP) area that would be affected by the proposed corridor improvements. Certified LCPs in the corridor include policies that may affect energy use and/or air quality, such as those related to land use, transportation, and access, which are discussed in Sections 5.2 and 5.3; however, LCPs generally do not include locally-specific policies and development standards on these issues. Section 30253 of the Coastal Act is assumed to apply. Based on available project and environmental data and the design/development strategies, and policies and implementation measures included herein, the proposed TREP/PWP improvements would offset the energy use generated by the incremental increase in VMT on I-5 by reducing VHT and energy use per person trip. TREP/PWP improvements would be consistent with air quality requirements through sensitive programming, design, and construction and by applying reasonable design/development strategies and mitigation measures; therefore, the NCC TREP/PWP is consistent with applicable energy, VMT, and air quality/GHG policies of the corridor LCPs.

5.2 PROMOTION OF PUBLIC TRANSIT AND SMART GROWTH

5.2.1 Public Transit and Smart Growth in the Corridor

5.2.1.1 Public Transit

The NCC's public transit network provides links between the corridor's origins and destinations, and beyond. Intercity, commuter, and light rail (along with buses, vanpools, and paratransit) all contribute to the network; however, at existing levels of service and with current land use patterns, public transit is unable to compete with the private automobile in meeting transportation demand in the corridor on a large scale. New and expanded transit services, coupled with the limited amount of remaining undeveloped land in the corridor, has fostered development of a regional Smart Growth policy intended to integrate land use and regional transportation resources. Corridor public transit services are illustrated in Figure 5.2-3.

LOSSAN Rail Corridor

The LOSSAN rail corridor provides north-south commuter and intercity rail service along the coast, reaching north to Los Angeles, and beyond to Santa Barbara and San Luis Obispo, and south to San Diego. Increasing the frequency, and therefore quality of service is limited by the fact that within the NCC less than one-half of the line has a second track. This causes congestion as trains are forced to wait for oncoming trains to pass before proceeding through a single-tracked segment. This congestion is compounded by the four different users of the rail corridor: COASTER commuter rail, Metrolink commuter rail, Amtrak intercity rail, and BNSF freight trains.

- *COASTER commuter rail* service runs between Oceanside and downtown San Diego and serves 10 stations, eight of which are within the corridor. There are 22 to 26 runs on weekdays with 34-minute headways at the peak hours. Travel between Oceanside and San Diego takes an average of 57 minutes. Average daily ridership is approximately 6,000 passengers. Less frequent service is provided on Saturdays and no service is provided Sundays, with exceptions for special events. Parking spaces at COASTER stations constrain ridership; on average, all station parking lots (with the exception of Oceanside) are at or exceed capacity by 8:00 A.M.[1]
- *Metrolink commuter rail service*, which serves Los Angeles, Orange County, and the Inland Empire, has a southern terminus at Oceanside Station. On weekdays, 16 trains provide service between Oceanside and Los Angeles and average weekday boardings on Metrolink at the Oceanside Station are 1,450 passengers.
- *Amtrak's Pacific Surfliner* route provides numerous stations on the LOSSAN rail corridor, including passenger intercity rail service between Downtown San Diego, Los Angeles, Santa Barbara, and San Luis Obispo. Surfliner trains stop at the Solana Beach and Oceanside stations and operate 22 runs on weekdays with an average headway of 60 to 90 minutes. Average travel time between Los Angeles and Downtown San Diego is 2 hours and 45 minutes. In FY2008, ridership at the Amtrak stations in the corridor was approximately 912,000 passengers.[2]

[1] *San Diego NCC – Corridor System Management Plan* (Chapter 2), July 2010.
[2] *San Diego NCC – CSMP* (Chapter 4), July 2010.

Other Corridor Transit

The SPRINTER light rail line runs east from Oceanside—the northern terminus of the COASTER—to Escondido. Seven of the 22-mile-long line's 15 stops are within the NCC and trains run every 30 minutes. Weekday ridership in March 2008 was approximately 8,000 passengers.[3]

Public bus service generally acts as a local feeder to other transit modes rather than a regional or interregional mode. Congestion on highways and regional arterials lead to long travel times, thereby making on-road transit an unattractive travel option. BREEZE bus services operate in North San Diego County from Del Mar to Oceanside. BREEZE bus routes extend beyond the NCC, but within the corridor, 26 routes operate with an annual ridership of 7 million passengers. Many routes are aligned and timed to closely integrate with the corridor's rail transit, thereby offering an alternative access mode to private automobiles. While two routes run north-south on major arterials—Route 101 on Coast Highway and Route 309 on El Camino Real—long-range commuter service has been discontinued on I-5. East-west bus service provides coastal and COASTER access to communities east of I-5. COASTER Connection shuttles at Carlsbad Poinsettia and Sorrento Valley COASTER stations link the stations to job and activity centers and are provided with the same frequencies as COASTER arrival and departure times. LIFT is the corridor's Americans with Disabilities Act (ADA) paratransit service for those unable to access fixed-route services. Additionally, the south part of the corridor is part of San Diego's Metropolitan Transit System (MTS) service area, which operates 15 bus routes in the corridor which have an annual ridership of 2.6 million passengers.[4]

SANDAG sponsors a vanpool program to further manage demand on roadways during peak-travel times. There are more than 550 vanpools in the program with 186 having destinations in the NCC serving about 1,500 people each weekday. SANDAG provides a $400 monthly subsidy per vanpool to encourage participation. Increasing congestion and faster travel times in carpool lanes has led to growing participation in this program. Nine park-and-ride lots in the corridor and SANDAG's Ridelink ridematching program further encourage the use of carpools, vanpools, and regional transit.

While transit ridership accounts for a large number of trips, the actual percentage of trips made using public transit in the corridor is small. Figure 5.2-1 and Figure 5.2-2 illustrate overall daily mode share and peak-mode share for trips crossing Los Peñasquitos Lagoon. Customers using I-5 account for the majority of trips with over 80% of the daily mode share and about 75% of the AM peak period. During the peak period, when COASTER is fully operating, the COASTER mode share is much higher (6.6%) than during the overall day (1.4%). Buses account for less than 1% of mode share for both overall and during the peak. Corridor transit service is focused on commute hours, which may explain the higher transit mode share during the peak hours.[5]

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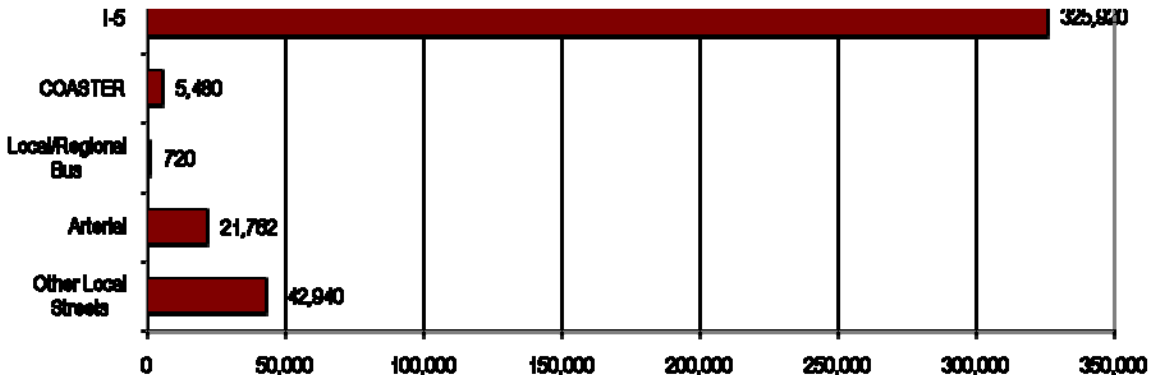
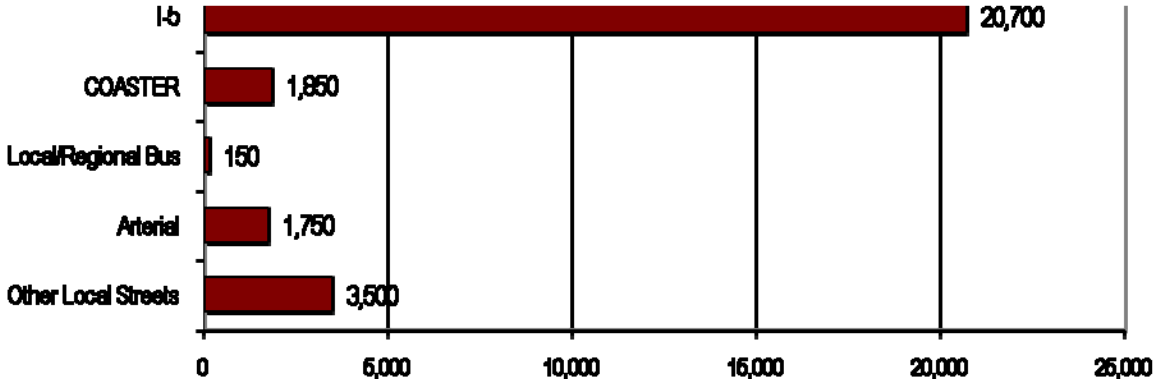
3 *San Diego NCC – CSMP* (Chapter 4), July 2010.
4 *San Diego NCC – CSMP* (Chapter 4), July 2010.
5 *San Diego NCC – CSMP* (Chapter 4), July 2010.

FIGURE 5.2-1: DAILY MODE SHARE
(Based on Daily Person Trips at Los Peñasquitos Lagoon)



Source: *San Diego NCC – CSMP* (Chapter 4), July 2010.

FIGURE 5.2-2: AM PEAK MODE SHARE
(Based on Daily Person Trips at Los Peñasquitos Lagoon)



Source: *San Diego NCC – CSMP* (Chapter 4), *July* 2010.

5.2.1.2 Smart Growth

The NCC traverses an urbanized portion of northwest San Diego County. The coastal areas typically consist of medium-density and small-lot residential developments. Northeastern San Diego County—east of the corridor and away from the coast—has experienced development at a slower (and later) pace, due in part to an early lack of necessary infrastructure and other needs. Recently, the non-coastal areas have been experiencing urbanization in the form of low-density residential developments on larger lots with ample open space.

Most of the NCC is considered nearly fully developed with urban uses. Few vacant, developable parcels of land remain in the immediate vicinity of the LOSSAN and I-5 corridors. As of 2004, an estimated 91% of northwestern San Diego County was considered developed, with 5% of the land

available for development and the remaining 4% undevelopable.[6] In general, the coastal area of San Diego County is developed with medium-density residential and other uses, and any new growth would be accommodated by redevelopment and infill development on vacant lots. The eastern parts of the study area, however, have more available vacant developable land, and growth is in the form of larger-scale residential and commercial developments. Table 5.2-1 shows the remaining developable acres in each of the six corridor jurisdictions and the proportion of that land planned for residential development. Both Oceanside and Carlsbad, which are similar in total area, have an estimated 13% of available developable land. Del Mar and Solana Beach have a small amount of land available for future development, and nearly all of that is reserved for residential uses. It is worth noting that while only 6% of available land in San Diego is considered suitable for development, it is expected to absorb 35% of the growth from the region.

TABLE 5.2-1: REMAINING DEVELOPABLE LAND (2004)

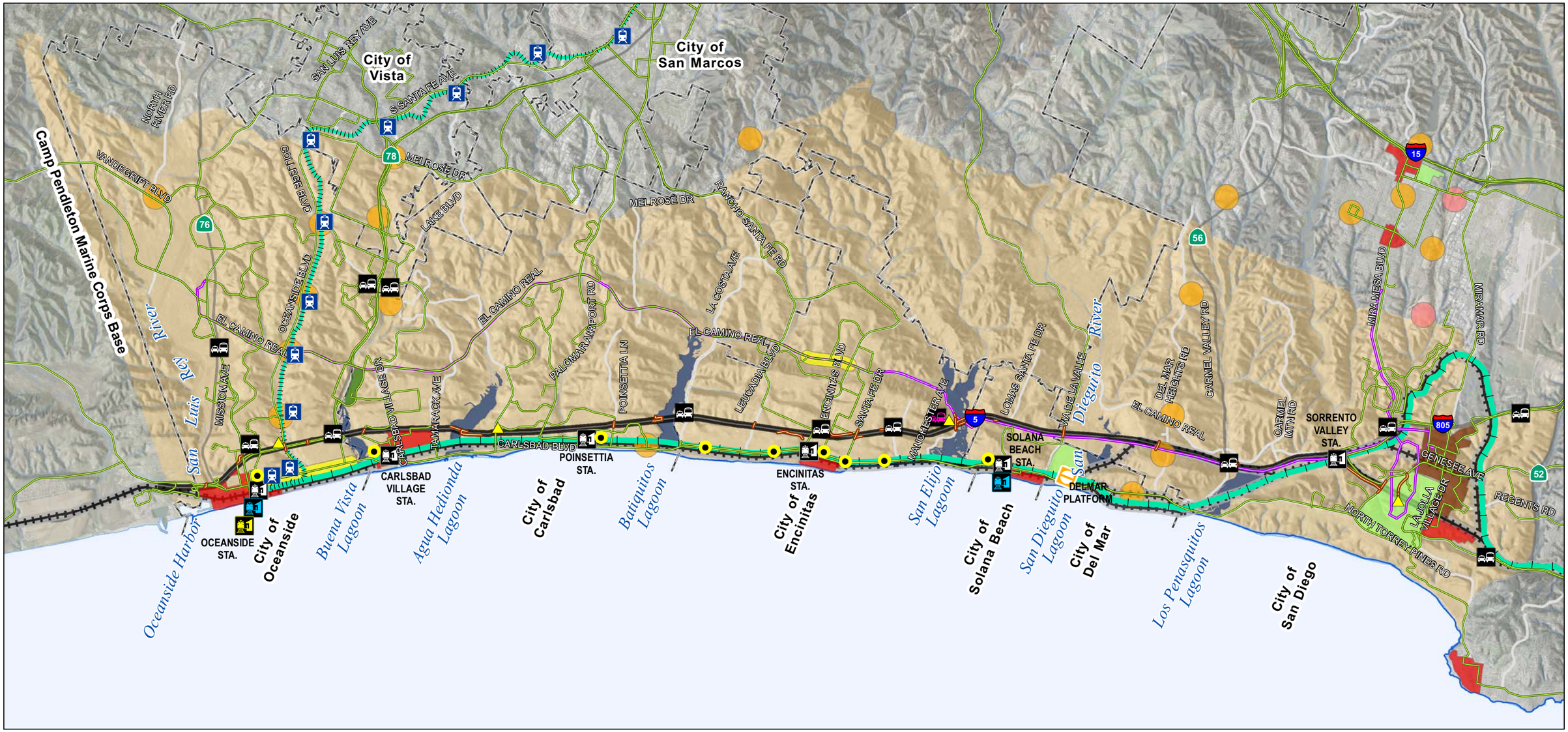
Jurisdiction	Total Acres	Remaining Developable Land		Remaining Planned Residential	
		Acres	Proportion	Acres	Proportion
Oceanside	26,978	3,493	13%	1,357	39%
Carlsbad	25,037	3,368	13%	1,895	54%
Encinitas	12,513	843	7%	644	76%
Solana Beach	2,178	42	2%	34	81%
Del Mar	1,143	52	4%	44	85%
San Diego	219,305	13,121	6%	4,991	38%
Total	287,154	20,919	7%	8,965	43%

Source: I-5 NCC Project Draft EIR/EIS (Section 3-2), June 2010.

SANDAG is the regional agency responsible for preparing population, housing, and employment projections for San Diego County, with forecasts based on the general and community plans of each of the region's jurisdictions. The 2030 Regional Growth Forecast Update was accepted for review and used by SANDAG on September 8, 2006. While the 2030 Regional Growth Forecast Update examines regional growth, each of the six corridor jurisdictions has its own individual growth management plans or policies. These plans generally focus on managing growth to ensure that new development does not occur at the expense of the natural environment or existing development, or before adequate infrastructure and services are in place.

Population forecasts by SANDAG through 2030 suggest that population growth and associated development will continue in the corridor and region. As shown in Table 5.2-2, population growth estimates for the various jurisdictions in the NCC area range from 2% to 49% between 2006 and 2030. Carlsbad, San Diego, and Oceanside are expected to experience the most growth with 30%, 49%, and 19%, respectively, while Del Mar and Solana Beach have the lowest projected population growth. Compared to the overall growth for the county (26%), most corridor communities are expected to grow more slowly. A higher level of anticipated growth in Carlsbad is due to the amount of available developable land inland from the coast on the urbanizing fringe.

[6] *I-5 NCC Project Draft EIR/EIS* (Section 3-2), June 2010.



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

FIGURE 5.2-3

Public Transit and Smart Growth Concept Map

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

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TABLE 5.2-2: POPULATION GROWTH PROJECTIONS (NCC JURISDICTIONS)

Municipality	1970	2006	2030	Percent Change 1970–2006	Percent Change 2006–2030
Oceanside	40,494	174,925	208,561	332%	19%
Carlsbad	14,944	98,607	128,772	560%	30%
Encinitas	17,210	62,815	71,025	265%	13%
Solana Beach	5,744	13,327	13,674	132%	2%
Del Mar	3,956	4,524	4,720	14%	4%
San Diego	23,315	141,435	181,642	422%	49%
NCC Travel Shed	105,663	495,633	608,394	369%	23%
San Diego County	1,357,854	3,066,820	3,855,085	125%	26%

Source: San Diego NCC–CSMP (Chapter 3), July 2010.

Growth is not only projected to occur in the NCC but throughout those regions accessed by the I-5 and LOSSAN corridors, including Orange County and Riverside County to the north, Imperial County to the east, and Baja California, Mexico to the south. Travel demand in the corridor has largely been driven by this population and housing growth as land has become scarce within the travel shed, requiring more people to commute from further away for employment.[7] Through 2050, it is forecasted that within the San Diego region, 56% of new residences will be constructed and 42% of new jobs will be located within a 10-minute walk of high-frequency transit stations, indicating that development of new, multi-modal transportation facilities is necessary to meet these future demands.[8]

SANDAG's Regional Comprehensive Plan (RCP), adopted in 2004, is the strategic planning framework for the San Diego region. It provides context for local and regional decisions while balancing the needs and goals of the region. The RCP is shaped by the principles of sustainability and Smart Growth, including a policy approach that connects local and regional transportation and land use plans and develops incentives for Smart Growth planning. As part of implementing the RCP and identifying areas that may be eligible for Smart Growth incentives, SANDAG developed a "Smart Growth Concept Map." This map identified 196 existing and future transit-supportive and Smart Growth opportunity areas in the region, 23 of which are located in the TREP/PWP corridor. The majority of these areas surround COASTER and SPRINTER transit stations and are in commercial cores. NCC Smart Growth areas are shown in Figure 5.2-3. The map is being used by SANDAG's Board of Directors to prioritize transportation investments and determine eligibility for Smart Growth Incentive funds. Within the corridor, all LOSSAN rail corridor station areas (excepting Sorrento Valley) have been named existing/planned or potential (Carlsbad Poinsettia) Smart Growth town centers. A town center is a suburban downtown with low- and mid-rise residential, office, and commercial buildings. Most users of a town center come from the immediate surrounding area, and the town center is served by corridor/regional transit lines as well as local or shuttle services.

Smart Growth principles intend to simultaneously improve the regional transportation system's performance and support local economic and development needs. In order to attract developers, businesses, and residents, Smart Growth communities focus on mixed-use development by using land and infrastructure efficiently, creating pedestrian-oriented neighborhoods that are attractive and distinctive, and providing desirable transportation and housing choices that are less dependent on the automobile.

7 *San Diego NCC–CSMP* (Chapter 3), July 2010.
8 *2050 Regional Growth Forecast*, SANDAG, February 2010.

5.2.2 TREP/PWP Concerns

Transportation investments can lead to reduced travel times, improved accessibility within or among regions, and reduced accidents and air pollution. These effects can potentially contribute to economic growth by allowing time and money previously spent on travel to be used for other purposes. By attracting businesses and residents to places with increased accessibility or improved quality of life and reducing development costs, population and employment growth may compromise the initial accessibility and quality-of-life benefits. Additionally, such growth can contribute to impacts beyond those directly attributable to the changes in the transportation system. For these reasons, proposed TREP/PWP improvements would support efforts to concentrate development in developed areas with existing public infrastructure and services, including transportation facilities. In doing so, public infrastructure and service extensions would not be needed to support new development or sprawl into undeveloped areas that may affect coastal resources and/or increase vehicle miles traveled (VMT) due to longer trips.

5.2.2.1 LOSSAN Rail Corridor Impact Assessment

Public Transit

The improvements to the LOSSAN rail corridor would provide facilities that would enable improved transit service with higher frequencies, shorter travel times, and more reliability in the NCC. As such, the improvements would have no negative impact on public transportation. By providing an auto-competitive public-transit alternative in the corridor, LOSSAN rail corridor demand would be expected to increase to more fully use the expanded corridor capacity.

The proposed project would help to accommodate existing and projected travel demand with public transit by increasing the rail line's capacity and therefore improving travel times and reliability, while reducing congestion; moreover, the identified improvements would address potential conflicts between public transit and the increased freight operations that would be expected without the improvements, resulting in more attractive and competitive passenger rail service in the corridor. Due to projected population and employment growth in the NCC, the number of passenger trains in the LOSSAN rail corridor is projected to nearly double between 2009 and 2030, increasing from 58 to 68 trains per weekday in 2009 to approximately 119 trains per weekday in 2030. The number of corridor freight trains is expected to increase from between 5 and 7 to 9 each day.[9]

Smart Growth

The growth of the region, and the resultant increased demand for passenger and freight service, would occur with or without the proposed rail improvements; therefore, the LOSSAN rail corridor improvements would not have any discernible effect on projected growth in the corridor.[10] Implementing the LOSSAN rail corridor improvements could have some localized effects on the type of development that may occur around station areas. Stations along the LOSSAN rail corridor would remain in their existing location, with only parking expansion proposed at some locations. For the most part, the areas surrounding existing stations are already developed. The increased rail service would add value to surrounding parcels and, provided local land use policies support them, higher-value land uses. Significantly improved transit service could increase the rate of development or change the types of establishments that develop. Overall, the effects of such changes would be small, given the existing and planned land uses in these suburban areas. This redevelopment would likely be Smart Growth, as it would be of increased density and focused on nearby train stations.

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9 *San Diego – LOSSAN Corridor Project Prioritization Analysis*, Final Project Report, July 2009.

10 *LOSSAN Final Program EIR/EIS* (Section 3-15), September 2007.

5.2.2.2 I-5 Highway Corridor Impact Assessment

Public Transit

Planned improvements to I-5 would expand capacity and improve operations on the existing highway corridor to meet current and projected increases in travel demand. Because travel times and reliability would improve for some highway-based modes, corridor travelers may use HOV or BRT to traverse the NCC instead of the LOSSAN rail corridor. Proposed highway improvements may, individually or cumulatively, encourage increased vehicle trips in the corridor because of improved operating conditions; however, occupancies per vehicle would be higher and therefore lead to a much higher person throughput and efficient use of the highway infrastructure.

Smart Growth

Implementing the I-5 NCC project would consist of improvements to an existing highway that serves an existing urban area. The project aims to maintain or improve existing and future traffic operations along I-5 while prioritizing the movement of people over the movement of vehicles.

Due to the urbanized nature of the corridor and limited availability of developable land, there is no known development potential in the corridor dependent on implementing the proposed highway improvements. As such, growth in the project area and surrounding region is expected to occur with or without implementation of the proposed project.

As shown in Table 5.2-1, only 7% of land within the six jurisdictions in the study area is considered available for future development, of which nearly half is planned for residential uses. The few undeveloped, vacant properties surrounding I-5 have been identified as infill redevelopment projects, approved projects, or open space.

Local jurisdictions along the I-5 highway corridor have identified growth forecasts and anticipated maximum build-outs within their local planning documents and implementing guidelines, including the cities' certified LCPs discussed in Chapter 2. These plans and policies generally focus on managing growth to ensure that new development does not occur at the expense of the natural environment, coastal resources, or existing development, or before adequate infrastructure and services are in place.

The existing I-5 highway corridor experiences severe congestion during peak hours; the proposed project is intended to relieve both the existing and anticipated future increase in congestion. Design of the project was coordinated with regional growth forecasts based on approved land use plans and, to contain costs and environmental impacts, project design does not provide for excess capacity beyond planned growth. Given the corridor's built-out land use pattern, limited availability of developable land, local land use and regional policies controlling future growth, and costs associated with redevelopment, the proposed highway improvements would have a minimal potential to result in growth-inducing impacts.

The potential for moderate growth in the project vicinity is inevitable and consistent with local land use plans and current trends. The benefits associated with the proposed project would not substantially affect the location, rate, type, or amount of growth in the project vicinity, due to other limits on growth, including land use controls within local and regional plans and policies, and the highly urbanized nature of the existing land uses.

Alternatively, without adequate public infrastructure, including transportation facilities, to serve the corridor's concentrated development pattern and maintain quality of life and growth, new development could instead occur in undeveloped and rural areas if land use controls and public works allow for it. Coastal resources could be affected by physical development and/or increased vehicles trips to and

from rural areas to reach common public and commercial support services and coastal recreation areas.

5.2.3 TREP/PWP Opportunities, Design/Development Strategies, and Policies/Implementation Measures

While corridor population and travel are expected to increase over the next 20 years, this growth will occur regardless if TREP/PWP program improvements are implemented. The regional goals of livability and sustainability require a healthy economy, improved and efficient mobility, and reliability of the transportation systems that serve to connect the local communities. By allowing approved and concentrated growth to occur in the already urban corridor (supported by sufficient public infrastructure and services), additional growth is not forced to spill over into undeveloped or rural areas. Focusing investment on facilities that encourage alternative modes of transportation—such as improvements to the existing LOSSAN rail corridor, introducing managed lanes on I-5 that allow for bus rapid transit (BRT) and encourage HOVs, or developing bike lanes and sidewalks—will assist in concentrating future growth in urban areas where corresponding travel demand can be accommodated by a combination of these alternative modes of transportation.

5.2.3.1 LOSSAN Rail Corridor Opportunities

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 approximately 20,000 passengers each day. Station facilities and parking improvements at 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 necessary public infrastructure elements to fully realize Smart Growth areas around LOSSAN rail corridor stations.

5.2.3.2 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements would maintain and enhance public access to the coast by facilitating the provision or extension of transit service, providing non-automobile circulation within the corridor, and by improving public transit facilities and operation for higher intensity uses in planned Smart Growth areas. Project-level analysis for proposed rail improvements would not occur until project alternatives are chosen; preliminary design, engineering, and resource impact analyses have been developed; and mitigation measures and monitoring plans prepared, as applicable. As such, the analysis contained herein for the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary resource impact assessment and design and development strategies to address potential public transit and growth issues. The following design and development strategies provide guidance in addressing public transit for specific rail development projects. As proposed rail improvement plans are developed, additional design and development strategies to further address corridor public transit and Smart Growth would be evaluated by the lead agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. In order to mitigate potential impacts from growth around LOSSAN rail stations, new station development should be coordinated early in project-level environmental and phased federal consistency reviews with local jurisdictions, when applicable. Coordination should ensure that land

use plans and controls can be revised and implemented in conjunction with any new station development.

2. During project-level LOSSAN rail corridor environmental and phased federal consistency reviews, when applicable, localized studies should be conducted around proposed new station sites and local jurisdictions consulted. Context-sensitive station designs should be developed and public and agency input sought to refine those designs and provide consistency with applicable land use plans. Stations should be designed to maximize inter-modal traffic and transfers, and reduce congestion in and around the station areas.

5.2.3.3 I-5 Highway Corridor Opportunities

The I-5 highway corridor's managed lane strategy would provide reliable, uncongested lanes to HOVs and buses using I-5. Direct access ramps (DARs) would provide direct access to and from the managed lanes at major corridor arterials and park-and-rides. This would allow managed-lane users to further avoid congestion, thereby further incentivizing carpooling and transit that use the DARs. Planned public transit routes, which would use these facilities, would include a BRT route from Oceanside to University City using El Camino Real, the Manchester DAR, and I-5. The reliability and travel times of these facilities would provide highway system users an incentive to use public transit or higher occupancy modes of transportation in the corridor. In addition, the highway infrastructure improvements provide new opportunities to develop and improve bike lanes, sidewalks and trails, which would encourage non-vehicular travel in the corridor.

Improvements to the corridor's main north-south route would accommodate existing and future travel as a result of regionally planned corridor population and employment growth. Growth within the project area would most likely occur without the proposed project or under any of the project alternatives. The potential for moderate growth in the project vicinity is inevitable and consistent with local land use plans and current trends.

5.2.3.4 I-5 Highway Corridor Policies and Implementation Measures

Proposed highway improvements would maintain and enhance public access to the coast by improving public transit in the corridor with reliable, uncongested lanes and DARs, which are designated for HOVs and bus use, and by providing non-automobile circulation throughout the corridor with new and improved bike lanes, sidewalks and trails. In addition, the I-5 improvements would limit expansion of the public works facility to within the established corridor serving existing, permitted, and planned development according to approved land use plans. As the proposed highway improvements and associated community and resource enhancements inherently address potential transit and growth issues indentified by applicable Coastal Act Policies, no policies or implementation measures are necessary to further ensure TREP/PWP consistency with the Coastal Act.

5.2.4 Coastal Act Consistency

Coastal Act Section 30250 requires new development to occur in already developed areas and areas with adequate public services to concentrate development away from undeveloped rural areas and thus avoid significant adverse effects, either individually or cumulatively, on coastal resources:

> (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.
>
> (b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.
>
> (c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

Coastal Act Section 30252 encourages the development of non-automobile public access to the coast to reduce demand on coastal access roads:

> 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, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Section 30254 limits constructing or expanding public works facilities to the capacity generated by permitted development:

> New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

5.2.4.1 LOSSAN Rail Corridor Consistency Analysis

Public Transit

The LOSSAN rail corridor improvements would result in shorter travel times and improved reliability, and would enable increased frequencies for inter- and intra-city public transit in the corridor. With more than half of the corridor currently operating on a single track with no passing track, the improvements, implemented in multiple different projects, would lead to double track in nearly the entire corridor. These phased projects are required to accommodate the planned increase in LOSSAN rail corridor services over the next 20 years as detailed in Table 5.2-3. Within this period, COASTER service is planned to more than double and be able to serve approximately 20,000 passengers daily.

TABLE 5.2-3: PLANNED WEEKDAY SERVICE (LOSSAN RAIL CORRIDOR)

	Existing	Near-Term Service Expansion	Mid-Term Service Expansion	Long-Term Service Expansion
Amtrak	22–24	26	32	36
COASTER	22–26	30	36	54
Metrolink	16	16	16	20
BNSF	5–7	7	9	9
Total	65–73	79	93	119

Source: San Diego - LOSSAN Corridor Project Prioritization Analysis, Final Project Report, July 2009

Station facilities and parking improvements at LOSSAN rail corridor stations would increase passenger capacity and enhance quality of service. Parking structures or significant expansions to parking facilities would be planned for Oceanside, Carlsbad Village, Carlsbad Poinsettia, Encinitas, and Solana Beach stations. Currently, parking at stations is a major capacity constraint and acts as a barrier to many potential rail corridor users. Increased capacity at LOSSAN rail corridor parking facilities would enable ridership increases. A permanent platform at Del Mar Fairgrounds would provide special event and coastal access, allowing the existing commuter- and long-distance-focused corridor to be used more for leisure trips.

The LOSSAN rail corridor today is used mostly for commuter and intercity travel. By increasing frequencies and times and days of service, as well as reducing travel times, other types of trips—including recreation and leisure trips for local users—become feasible for rail travel. As stations are all close to coastal lagoons or beaches, rail becomes a competitive mode for coastal access.

LOSSAN rail corridor improvements would 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. These improvements would maintain and enhance critical public transport services for industries vital to the economy of the region, state, and nation.

Planned improvements to the LOSSAN rail corridor would expand public transit service access to the coast. All six LOSSAN rail corridor stations are within blocks of a major coastal resource—either a public beach or lagoon. Reduced travel times, increased frequencies, and improved weekend and off-peak service would make rail more competitive with automobiles as an access mode for coastal resources. As part of the LOSSAN rail corridor improvements, parking facilities at most stations would be upgraded and expanded, and pedestrian and bicycle routes would be improved, which would further facilitate transit to access the coast. As such, improvements to the LOSSAN rail corridor would be consistent with Section 30252 of the Coastal Act.

Growth

Providing higher-quality rail service in the LOSSAN rail corridor is one of the necessary public infrastructure elements to fully realize Smart Growth areas around LOSSAN rail corridor stations. By definition, SANDAG's Town Center Smart Growth Areas are served by regional and corridor transit, which are mixed-use downtowns with low- and mid-rise buildings. To ensure a mix of uses and enable non-auto-oriented development, a certain level of density is necessary. Higher density levels enable trips to be made by non-automobile modes. With a mix of uses in a concentrated area, many trips can be made on foot or bicycle. Further destinations can be reached by using regional transit systems. An improved rail corridor supports Smart Growth development. Previous Coastal Commission decisions

have found that concentrating development in already developed areas supports transit services and opportunities.

By improving public services, specifically transit, in an already developed corridor planned to absorb regional growth, growth would occur in these areas—instead of in further sprawling land use patterns that develop natural or rural areas—limiting impacts to natural resources. It is estimated that 70% of future job and housing growth would occur within such "transit investment areas." Capacity enhancements in the rail corridor would help to ensure that the corridor is able to support the regionally planned growth.

5.2.4.2 I-5 Highway Corridor Consistency Analysis

Public Transit

The I-5 highway corridor improvements would prioritize access by public transit and incentivize the use of HOVs. The corridor's two managed lanes in each direction would provide reliably uncongested travel to HOVs, vanpools, buses, and other transit vehicles using I-5. Any additional capacity in the managed lanes would be available to SOVs for a fee, which would ensure that the new lanes are not underused and the benefits of overall decreased traffic congestion for all trip types are realized. The fee would vary, based on the use of the managed lanes, to ensure they remain uncongested. Profits garnered from the fee program would be allocated to further improve corridor transportation, including HOV facilities and transit service and operation, further increasing mode competitiveness. As shown in Table 5.2-4, the addition of managed lanes in this corridor is expected to nearly double HOV volumes from the No Build Alternative on I-5 northbound during the PM peak and I-5 southbound during the AM peak.

TABLE 5.2-4: WEEKDAY HOV VOLUMES (I-5 HIGHWAY CORRIDOR)

From	To	AM Peak				PM Peak			
		Existing[a]	2030 No Build[b]	2030 10+4[c]	2030 8+4[d]	Existing[a]	2030 No Build[b]	2030 10+4[c]	2030 8+4[d]
Northbound									
I-5/I-805 Junction	Carmel Valley Road	300	1,920	1,880	2,000	1,100	1,620	2,450	2,540
Carmel Valley Road	Lomas Santa Fe	300	1,580	1,520	1,640	1,100	1,230	2,040	2,130
Southbound									
Lomas Santa Fe	Carmel Valley Road	1,200	1,030	2,050	2,400	350	1,010	1,640	2,030
Carmel Valley Road	I-5/I-805 Junction	1,200	1,030	2,450	2,800	350	1,480	2,040	2,430

Source: I-5 NCC Project Draft EIR/EIS (Section 1-3), June 2010.

a – Existing conditions include current (2006) baseline information.
b – 2030 No Build Alternative includes ongoing operations and maintenance and separate projects in the corridor through 2030.
c – 2030 10+4 scenario includes 10 general purpose (GP) lanes with 4 HOV/managed lanes in the median separated from the GP lanes with a painted buffer or concrete barrier.
d – 2030 8+4 scenario include 8 GP lanes with 4HOV/managed lanes in the median separated from the GP lanes with a painted buffer or concrete barrier.

DARs would provide direct access to and from the managed lanes at major corridor arterials and Park and Rides. This would allow users of the managed lanes to further avoid congestion and would further incentivize the use of the managed lanes. Planned public transit routes that would use these facilities

would include a BRT route from Oceanside to University City using El Camino Real, the DAR at Manchester Avenue, and I-5. This BRT service, included in SANDAG's RTP, would have 10-minute headways, and would include other prioritization measures to improve service. Additional transit services that could use the managed lanes would be evaluated. The reliability and travel times of the managed lanes and corresponding facilities would provide users of the highway system an incentive to use public transit or higher-occupancy modes of transportation in the corridor. These facilities would allow for the provision of public transportation to coastal areas, which are currently underserved, including those areas of the corridor less accessible to LOSSAN rail corridor stations or to trips with origins or destinations that could not be served by the rail corridor.

Community enhancements included in the I-5 highway corridor improvements would further support non-automobile transportation. Bike and hiking trails, pedestrian rail corridor crossings, adding and widening of overpass sidewalks and bike lanes, and other improvements would create 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.

The proposed TREP/PWP multi-modal program focuses on implementing transportation improvements that would facilitate various means of transportation to meet the region's needs, including rail, bicycle, and pedestrian improvements. While each of these improvements would increase corridor capacity, collectively, they would not be sufficient to accommodate expected corridor travel growth or avoid highway improvements that would be critical to maintaining an efficient transportation system that would meet the greatest variety of travel demand for residents, commuters, visitors, and goods movement.

Planned improvements to the I-5 highway corridor would help provide coastal public transit access and would provide for non-automobile circulation within the corridor. I-5's managed lanes and DARs would provide priority service for buses and other transit vehicles as well as HOVs. Future bus routes using this infrastructure would facilitate direct access to coastal resources. Additionally, trips otherwise made by private automobile could use these new services and thereby provide additional capacity for other vehicles to access the coast. Currently, many of the corridor's bicycle and pedestrian routes are disjointed due to topographical and infrastructure barriers. I-5 highway corridor improvements would make or materially improve many of these necessary connections. Through the development of pedestrian bridges and corridor bike and hiking trails (and the addition and enhancement of sidewalks and bike lanes), safe, non-automobile dependent routes to and within the coastal zone would be provided. As such, improvements to the I-5 highway corridor are consistent with Section 30252 of the Coastal Act.

Growth

Improvements to the corridor's main north-south route would accommodate existing and future travel as a result of regionally planned corridor population and employment growth. Accommodating some of this travel demand in the I-5 highway corridor would have multiple benefits. As facility improvements focus on non-SOV travel, growth in travel could be accommodated by a higher percentage of transit and HOVs, meaning that each individual person trip would have a smaller impact as the ratio of people to vehicles increases. Addressing future I-5 congestion would alleviate the need to accommodate existing and future vehicles on the Pacific Coast Highway and other arterial streets that could otherwise require widening or other improvements, resulting in significant impacts to coastal communities and to public recreational areas. Providing corridor access by addressing congestion on I-5 would allow infrastructure to support planned growth to occur in the already developed corridor as infill and as redevelopment. If public services in the corridor are insufficient to accommodate existing or additional

development, growth is likely to encroach into rural and undeveloped areas as people seek to improve quality of life. By enabling growth in already developed areas, significant impacts on natural areas are averted.

Growth within the project area would most likely occur without the proposed project or under any of the project alternatives.[11] Growth is considered an indirect issue related to the proposed project that cannot be directly minimized through alternate project features or design. The regionally projected growth in the NCC supported by the proposed infrastructure improvements would mostly be infill or redevelopment. The potential for moderate growth in the project vicinity is inevitable and consistent with local land use plans and current trends; therefore, no adverse effects associated with growth would be anticipated by implementing any of the alternatives.

5.2.4.3 Coastal Act Consistency Analysis Summary

Both the proposed rail and highway projects would increase travel capacity in the corridor, thereby reducing travel times and improving quality of service. Although such improvements could induce growth in other cases, this corridor is almost entirely built-out and contained by natural and jurisdictional borders including the Pacific Ocean to the west, Camp Pendleton to the north, dense University Towne Centre (UTC) and Downtown San Diego to the south, and the I-15 travel shed to the east. By providing improved public services to an existing corridor, development would be concentrated and supported in an area of existing public services and thereby would limit development sprawl into undeveloped areas. Any new development in the corridor would be located within, contiguous with, or in close proximity to existing development and public infrastructure. Any growth that would occur in the NCC and be served by the proposed infrastructure improvements would be infill or redevelopment. This growth would actually replace growth that otherwise would occur at the urban fringe or beyond and lead to the development of rural lands. As unplanned growth would not be induced by these improvements and therefore the increase in capacity would not have any indirect impacts on other public services, the improvements would be consistent with Coastal Act Section 30250.

Proposed planned improvements to the LOSSAN rail corridor and the I-5 highway corridor would also improve rail and traffic operations. To be found consistent with Coastal Act Section 30254, the proposed program must serve existing development, or if it accommodates new development, such development must be at planned and approved densities. The proposed LOSSAN and I-5 corridors improvements would be located within a developed urban area and would provide safe and adequate travel circulation for growth that is already planned and anticipated. The regionally projected growth that would occur in the NCC would be supported by the proposed infrastructure improvements. These regional growth projections concentrate and maintain anticipated development growth within and/or contiguous to the existing developed corridor and reduce development pressure on rural or undeveloped lands. Proposed improvements would not induce new or unplanned growth within the coastal zone. As such, the LOSSAN rail corridor and I-5 highway corridor development is consistent with Section 30254.

Based on available project and environmental data and policies and implementation measures included herein, the proposed TREP/PWP improvements would concentrate development in already developed areas, encourage the development of non-SOV access to the coast, and limit the capacity of public works to serve only permitted development; therefore, the TREP/PWP is consistent with Sections 30250, 30252 and 30254 of the Coastal Act.

[11] *I-5 NCC Project Draft EIR/EIS* (Section 3-2), June 2010.

5.2.5 Local Coastal Program Consistency

Appendix A includes a local coastal program (LCP) policy consistency analysis matrix that evaluates TREP/PWP consistency with the polices of each LCP area that would be affected by the proposed I-5 highway corridor improvements, and by those LOSSAN rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail corridor projects included in the TREP/PWP that improve the movement of freight and thus fall under the exclusive jurisdiction of the Surface Transportation Board (STB), the LCP policy consistency analysis may provide guidance or background information for analyzing rail project consistency with Sections 30250, 30252 and 30254 of the Coastal Act, as appropriate and applicable (see Section 1.1.3 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). The corridor's LCP transit and Smart Growth policies are summarized with brief city-specific consistency analyses below. These integrate and supplement Sections 30250, 30252 and 30254 of the Coastal Act. A complete list of LCP policies and corresponding consistency analysis is included in the LCP policy consistency analysis for each city (Appendix A).

5.2.5.1 Local Coastal Program Consistency Analysis Summary

Some of the certified LCPs in the corridor include policies that mirror the requirements of Sections 30250, 30252 and 30254 of the Coastal Act; however, the LCPs for San Diego, Encinitas, and Oceanside also include additional and specific policies and development standards that support a multimodal approach to transportation and ensure that new growth is supported by adequate public infrastructure.

City of San Diego

The City of San Diego LCP contains Smart Growth and public transit policies in the North City Land Use Plan, in addition to some of the individual Community Plans affected by the proposed TREP/PWP improvements. The City's LCP includes several policies that address concentrating development in already developed areas where infrastructure, transportation, commercial, and recreational options exist. The LCP policies also focus on improving access to public transit and providing a balanced transportation system that serves multiple modes. The LCP, with its collective plan components, includes Smart Growth and transit policies that are particularly unique to this portion of the corridor as follows:

- North City Land Use Plan
  - Improve public transportation between La Jolla and the rest of metropolitan San Diego.
- Torrey Pines Community Plan
  - Public mass transit service, including bus, light rail, and commuter rail should be provided to and through the Torrey Pines community.
- Torrey Hills Community Plan
  - Support the provision of secure park-and-ride facilities in the vicinity of access points to the major regional transportation facilities.
  - Expand transit services to Torrey Hills
- University Community Plan
  - Encourage alternative modes of transportation by requiring developer participation in transit facility improvements, the Intra-Community Shuttle Loop and the LRT line.
  - Encourage the development of a high-speed, LRT system to serve the university community and other northern communities.

- North City Future Urbanizing Area (NCFUA) Framework Plan
  - The community cores should contain dedicated transit right-of-ways for BRT or LRT service providing access to the regional transit system. Where feasible, local feeder bus or shuttle service should be provided to connect the residential areas with the community core. Development of a local transit center where trunk-line and feeder-bus service connect is encouraged and should be located in the community core.
  - Create a land use and circulation pattern that supports multimodal travel habits for people living and working in the NCFUA. Give preference to transit on congested road segments.
  - The North City West Community Plan designates a regional transit terminal at El Camino/Del Mar Heights Road. The NCFUA transit service should connect with this and other links to the regional transit network.
  - Practical and convenient alternatives to the automobile shall be provided at the time of need by providing transit stops, buses, signage, and other improvements.

TREP/PWP improvements would improve public transit access to areas all of the community plan areas in San Diego's North City, directly or indirectly. Although not all of the proposed services would be provided with the program of projects included in the TREP/PWP, LOSSAN rail corridor improvements and the addition of managed lanes that enable BRT would enhance the public transit network in the corridor. As such, these policy requirements do not present potential policy conflicts and would not require that policies be amended to ensure consistency of the TREP/PWP improvements with the certified LCP.

City of Encinitas

The City of Encinitas LCP encourages an integrated, convenient, diverse transportation system including expanding public transit and emphasizing it in future development while preserving community values and character. This includes promoting other modes of transport to reduce dependence on the personal automobile, encouraging shuttle service and park-and-ride facilities and cooperating with San Diego County and SANDAG to help plan and implement a regional multi-modal transportation system that is accessible to residents in the city.

The LCP also indicates that the land occupied by the I-5 highway and the LOSSAN rail corridors are to be reserved and protected for transportation purposes, and shall not allow development or encroachment of any other private use, structure or facility. Compatible public uses, facilities and support spaces such as landscaping, localized street widening or realignment, development of a "linear park," public automobile parking or shared parking in a public district, and pedestrian, bicycle, or trail facilities may be considered. Additionally, the areas adjoining the freeway corridor are to remain as low-density residential while preserving the best natural features and avoid creating a completely urbanized landscape, and maintain I-5 Interchange areas to conform to the specifications of this overall goal.

TREP/PWP improvements would encourage a multimodal transportation system. The DARs included at Manchester would enable the development of park-and-ride facilities and provide a direct link to the BRT using I-5's managed lanes before continuing north on North El Camino Real in Encinitas. The lands currently used by the LOSSAN rail and I-5 highway corridors would remain as transportation facilities and adjacent projects would be compatible public uses. Smart Growth is anticipated to occur around LOSSAN rail corridor stations and other identified Smart Growth areas, and not along the low-density residential I-5 corridor. As such, these policy requirements do not present potential policy conflicts and would not require that policies be amended to ensure consistency of the TREP/PWP improvements with the certified LCP.

City of Oceanside

The City of Oceanside LCP has as an objective to "endorse infilling and revitalization of the Coastal Zone for the purpose of creating an attractive, balanced and economically sound urban environment." Supporting policies include promoting development of a high level of transportation facilities, public services and amenities, such as supporting continued high levels of North Coast County District (NCTD) service and supporting expansion and upgrading of Amtrak service, commensurate with need. Additionally, new development is conditioned on essential public facilities being able to serve the demands of the growth.

TREP/PWP improvements would provide public services in the form of transportation, which could enable infill development in Oceanside. Improvements to the LOSSAN rail corridor would provide the capacity necessary to increase NCTD and Amtrak services. BRT along El Camino Real would further expand Oceanside's transit services. As such, these policy requirements do not present potential policy conflicts and would not require that policies be amended to ensure consistency of the TREP/PWP improvements with the certified LCP.

Summary

Based on available project and environmental data and the policies and implementation measures included herein, the proposed TREP/PWP improvements would focus any induced development in already developed areas, enhance non-automobile public access to the coast, and limit the expansion of public works facilities to the capacity generated by permitted development through the programming and design of program improvements and by applying reasonable mitigation measures; therefore, the TREP/PWP is consistent with applicable Smart Growth and public transportation policies of the corridor LCPs, and policies would not need to be amended to implement the proposed transportation facility improvements.

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5.3 Public Access and Recreation

5.3.1 Public Access and Recreation Resources in the Corridor

As discussed in Chapter 2, the NCC contains a variety of public access opportunities to numerous types of recreational resources. The beaches, lagoons, state parks, recreational facilities, and other coastal resources in the NCC are regional and statewide assets that shape the character of the natural and built environment along the corridor (Figure 5.3-1). Most coastal access to and within the corridor is accomplished by private automobiles (approximately 70%),[1] with nearly every interchange along I-5 providing direct access to a significant coastal recreational area.

While the majority of access to the corridor's coastal recreational areas is provided by vehicle, all of the travel shed's north-south passenger rail services also support access to NCC beaches and/or lagoons, with other, local access obtained on foot and via bicycle. North-south passenger rail service in the corridor includes six stations that are located just a few blocks from a beach, lagoon, or state park. The SPRINTER light rail, initiated in March 2008, is an east-west rail line that generally runs parallel to the SR-78 corridor. It also supports coastal access from inland areas, operating 13 stations on the 22-mile line between the Escondido Transit Center and the Oceanside Transit Center. In addition, local east-west bus service supports coastal access across I-5 from inland areas east of I-5.

5.3.1.1 Beaches

The corridor includes about 30 miles of Pacific Ocean coastline with world-renowned public beaches that drive the local, regional, and state economy. Scenic public beaches in the corridor include La Jolla Shores, Scripps Pier, Black's Beach, Torrey Pines Gliderport, Torrey Pines State Beach, Del Mar Beach, Cardiff State Beach, San Dieguito Rivermouth (Dog Beach), Solana Beach (Pillbox), Seaside State Beach, San Elijo State Beach, Moonlight State Beach, Leucadia State Beach (Beacon's Beach), Stone Steps Beach, Grandview Beach, Ponto State Beach, Carlsbad State Beach, and Oceanside State Beach. The beaches are used for surfing, swimming, tide pooling, camping, hiking, fishing, sports, and relaxation. Approximately 2 million trips to corridor beaches are made each year (one-half of all beach trips in San Diego County).[2]

5.3.1.2 Natural Resource Areas

The corridor's most significant natural resource areas also support the corridor's most significant passive and active coastal recreational opportunities. The lagoons in the corridor have varying levels of recreational and educational facilities, including trails and interpretive facilities, with many of them providing both coastline and upland recreation opportunities (Figure 5.3-1). Additional upland recreation areas within the corridor include:

- Los Peñasquitos Canyon Preserve is an open space jointly owned and administered by the City and County of San Diego. The preserve is located east of I-5 in San Diego and consists of approximately 4,000 acres of Peñasquitos and Lopez canyons and is characterized by steep slopes, riparian stream corridors, flat mesa tops, and grassy hillsides that host a diverse collection of flora and fauna. The preserve provides biking and hiking recreation on designated trails.
- Torrey Pines State Reserve is managed by the California Department of Parks and Recreation. The reserve consists of approximately 2,000 acres of land surrounded by the Pacific Ocean to the west, Del Mar to the north, La Jolla to the south, and I-5 to the east. The reserve has several

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1 *San Diego NCC–Corridor System Management Plan* (Chapter 3), July 2010.
2 *San Diego NCC–Corridor System Management Plan* (Chapter 4), July 2010.

components, including the Main Reserve, an Extension Reserve, Los Peñasquitos Marsh Natural Preserve, and Torrey Pines State Beach. The reserve includes a visitor center and offers a variety of programs for the public and volunteers ranging from interactive presentations and guided tours to trail maintenance. The mouth of Los Peñasquitos Lagoon is located at the northern end of the main reserve.

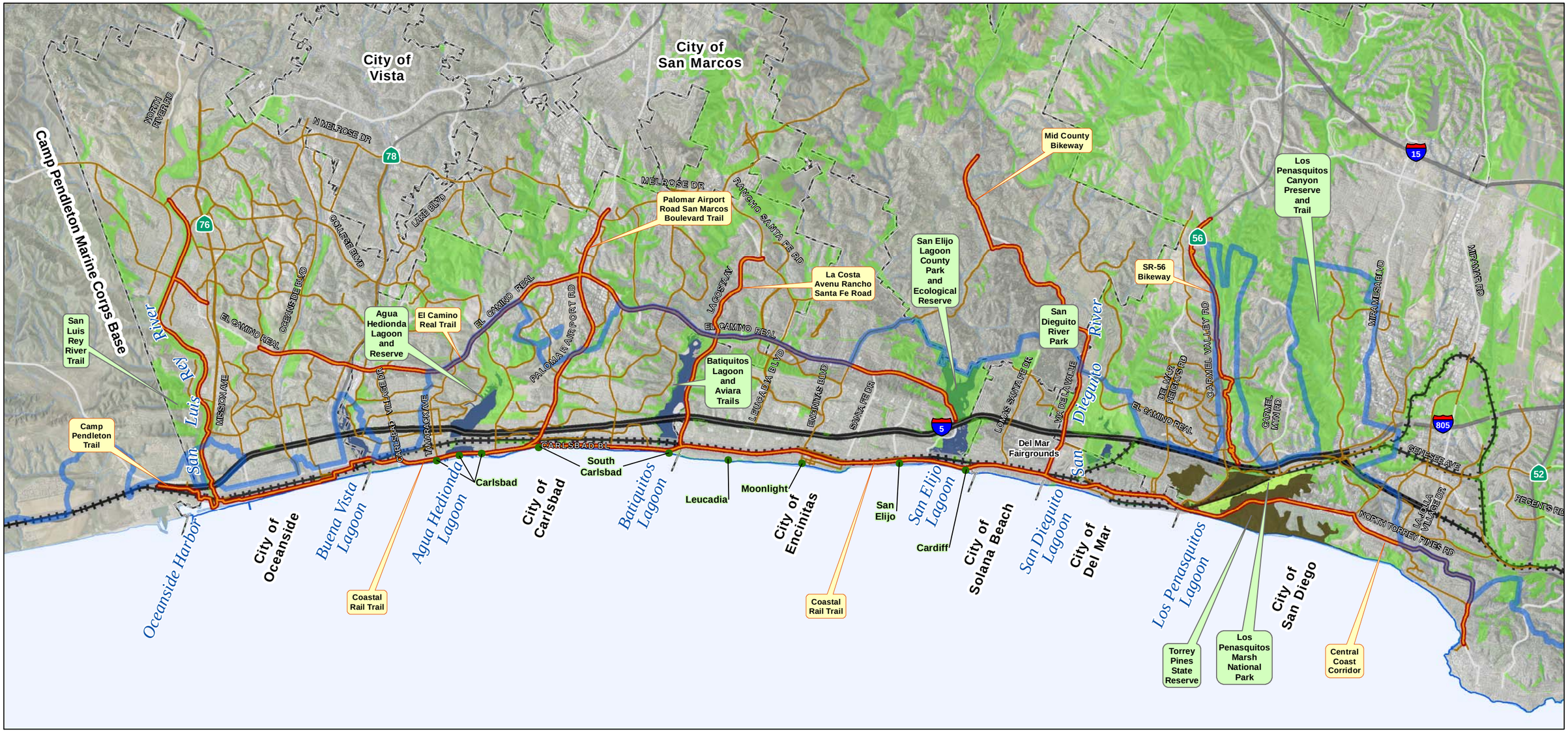
Los Peñasquitos Lagoon is encompassed by the Los Peñasquitos Marsh Natural Preserve and is one of the last salt marshes and waterfowl refuges remaining in Southern California. Los Peñasquitos Lagoon is home to several rare and endangered species of birds and serves as a stopping and nesting place for many migratory birds.

- San Dieguito River Park (SDRP) encompasses approximately 88,000 acres of land, originating at the mouth of San Dieguito Lagoon and extending east along the San Dieguito River valley. The SDRP is administered by the San Dieguito River Valley Regional Open Space Park Joint Powers Authority (JPA). The JPA is working to create a regional open space greenway and park system by preserving and restoring land along the length of the San Dieguito River watershed, which would include an integrated corridor of walking, equestrian, and bicycle trails that would extend from the Pacific Ocean to Volcan Mountain.

  The coastal area of the SDRP has a variety of landowners, including the JPA, the California Department of Fish and Game (CDFG), the State of California 22nd District Agricultural Association, the cities of San Diego and Del Mar, the Southern California Edison (SCE) company, and the North County Transit District. Access to the SDRP coastal area for recreational use is currently very limited. Public access to the majority of the park is prohibited, as the San Dieguito Wetlands Restoration Project is underway. Access is currently limited to one short trail—the Riverpath Del Mar—located near the Del Mar Public Works Yard, along Jimmy Durante Boulevard.
- San Elijo Lagoon County Park and Ecological Reserve is located between Encinitas and Solana Beach and extends inland to the community of Rancho Santa Fe. The reserve is bordered by the Pacific Ocean to the west and a mix of residential and undeveloped land to the east, north, and south. The reserve is owned by the State of California to the west of I-5 and by the County of San Diego to the east of I-5. The County of San Diego and CDFG have an agreement to operate both the eastern and western basins of San Elijo Lagoon as a State Ecological Reserve under the administration of the County of San Diego Department of Parks and Recreation.

  The entire reserve is approximately 1,000 acres and consists primarily of a shallow-water estuary fed by a watershed from Escondido Creek and Orilla Creek tributaries. The reserve contains a diverse habitat with six plant communities including coastal strand, salt marsh, freshwater marsh, riparian scrub, coastal sage scrub, and mixed chaparral, which support a variety of plant and wildlife species.

  The reserve includes over 5 miles of hiking trails open to the public. The trail system is presently restricted to the East Basin as the riprap slope protection under the I-5 bridge at Manchester Avenue prevents passage into the West Basin. A nature center on the northwest side of the lagoon features exhibits interpreting the lagoon's natural and cultural resources as well as the "green" design and construction features of the building. It serves as a base for education, land stewardship, and environmental protection.



NORTH

Coastal Zone Boundary
City Boundary
State Beach
State Park
National Park
Open Space and Parks

Bicycle and Pedestrian Routes
Primary Existing Bicycle Facility
Secondary Existing Bicycle Facility

I-5 Project Area
LOSSAN Project Area

Interstate
State Route
Major Arterial

0 1 2 4 Miles

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

FIGURE 5.3-1

Coastal Access and Recreational Resources (North Coast Corridor)

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

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- **Batiquitos Lagoon/Aviara Trails** is located in Carlsbad, just north of Encinitas, and is owned and preserved by the State of California as a State Ecological Reserve. Batiquitos Lagoon is bounded by the Pacific Ocean to the west, steep hills to the south traversed by La Costa Avenue, gentle slopes to the north adjacent to the Aviara development and golf course, and San Marcos Creek to the east, which serves as the connection between Batiquitos Lagoon and the watershed farther east.

  Batiquitos Lagoon is approximately 610 acres and is currently subject to coordinated restoration efforts by the Port of Los Angeles, the City of Carlsbad, the CDFG, the California State Lands Commission, the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS). The lagoon reserve includes a nature center, and a two-mile public hiking trail served by one public parking lot near the nature center and four public parking lots along Batiquitos Drive.
- **Agua Hedionda Lagoon/CDFG Reserve** is an approximately 400-acre, man-made water body that was constructed in 1954. The lagoon is owned by Cabrillo Power II, a privately owned corporation that leases the lagoon to the City of Carlsbad to manage recreational and commercial uses. Agua Hedionda Lagoon is bounded by the Pacific Ocean to the west, undeveloped land to the east, the Encina Power Plant to the south, and residential development to the north.

  Recreation activities at Agua Hedionda Lagoon include boating, water skiing, and canoeing. The City of Carlsbad allows boating and water skiing on the lagoon, and the YMCA operates a canoeing center. A white sea bass research facility, jointly managed by Hubbs/Seaworld and CDFG, and a commercial mussel-growing facility are the lagoon's two aquaculture facilities. CDFG manages a 186-acre wetlands ecological reserve at the eastern end of the lagoon.
- **Buena Vista Lagoon** is an approximately 350-acre freshwater lagoon owned by CDFG, which manages the lagoon as an ecological preserve. Buena Vista Lagoon is located on the border between Oceanside and Carlsbad and is bounded by the Pacific Ocean to the west; urban development, SR-78, and Jefferson Street to the east; and urban development to north and south. Additionally, the Buena Vista Lagoon Foundation, a nonprofit organization, works as an advocate for the lagoon to conserve and restore marsh and wetlands areas.

  Recreational uses at Buena Vista Lagoon include fishing and passive recreation such as hiking and picnicking. A nature center provides exhibits of the natural resources found at the lagoon, and supports classroom programs and guided nature walks for the public.
- **San Luis Rey River** is located primarily along Highway 76 in Oceanside. Originating in the Palomar and Hot Springs Mountains, the river extends approximately 55 miles across northern San Diego County to the ocean, forming a watershed with an area of approximately 562 square miles.

  The river watershed supports 36 vegetation communities, with the coastal sage scrub, chaparral, and grassland communities being the most abundant; numerous protected and sensitive species and vegetation communities occur throughout the watershed. Within Oceanside, the watershed includes the 7-mile San Luis Rey River Trail, which is a paved, class-one bicycle and pedestrian trail that follows the San Luis Rey River.

5.3.1.3 Bike and Pedestrian Resources

Within the NCC, there is an existing bicycle and pedestrian network that provides access to the coast and other upland recreation areas. As described in Chapter 2, existing primary bicycle and pedestrian routes include the Coastal Rail Trail, Camp Pendleton Trail, San Luis Rey River Trail, El Camino Real Bikeway, Palomar Airport Road/San Marcos Boulevard Bikeway, La Costa Avenue/Rancho Santa Fe Road Bikeway, Mid County Bikeway, SR-56 Bikeway, and the Central Coast Corridor (Figure 5.3-2).

These regional routes connect public beaches and parks, residences, town centers, transit centers, and other activity centers. Specifically, the Coastal Rail Trail provides a north-south route with direct access to coastal facilities.

The Coastal Rail Trail is part of the Pacific Coast "Bike"-Centennial Bicycle Route, which stretches the length of the California coastline. 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 the inter-regional user. In Solana Beach, Carlsbad, Oceanside, and San Diego, 3.6 miles of the Coastal Rail Trial have been completed. In the future, these segments of the rail trail will be part of the state's 42-mile Coastal Rail Trail, which will run adjacent to the LOSSAN rail corridor, connecting commuter rail and transit stations for the region and supporting local and visitor access to neighborhoods, businesses, and beaches.

The California Coastal Trail is intended to be a continuous 1,200-mile public right-of-way (ROW) along the California coastline, with linkages to other inland trail systems and to the State Park system to facilitate increased accessibility to coastal resources and state parks from urban population centers. The Coastal Commission's public access plan indicates that approximately 69% (55 miles) of the California Coastal Trail is completed in San Diego County, with approximately 20 miles of missing links located in North County at Camp Pendleton, Point Loma (a military reservation), and naval shipyards and portions of the Port of San Diego.

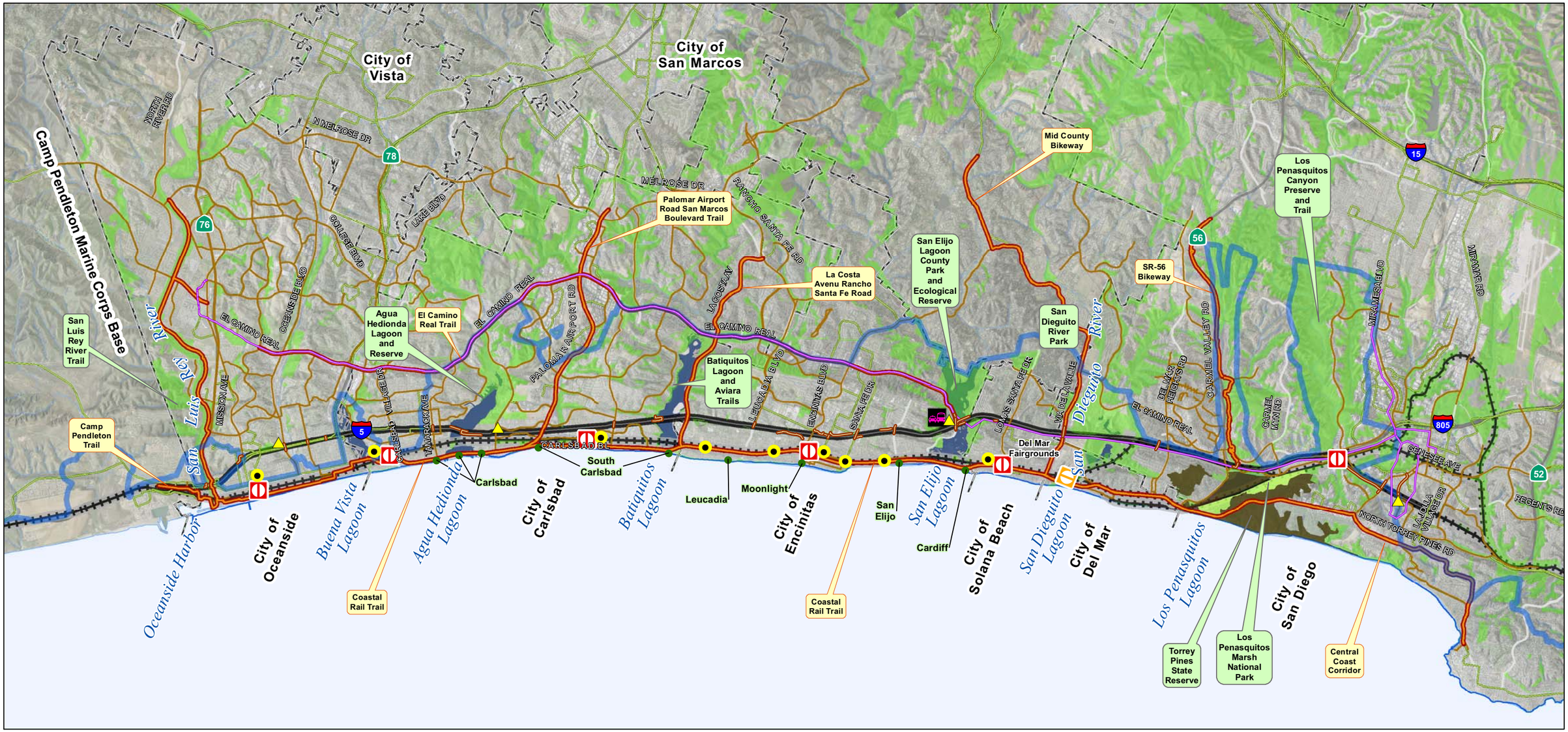
5.3.2 TREP/PWP Concerns

The proposed TREP/PWP transportation improvements would not adversely affect coastal access and recreational resources. Rather, the proposed improvements have been planned and designed to facilitate improvements to the corridor's existing transportation network and to enhance multi-modal access throughout the corridor. The proposed TREP/PWP addresses existing concerns regarding maintaining access to the coast and upland recreation areas, and would enhance, wherever feasible, coastal access and recreation opportunities and facilities in the NCC.

5.3.2.1 Coastal Access Deficiencies

Chapters 2 and 3 provide context and background information on existing public access and recreation opportunities in the corridor, and issues associated with maintaining and improving existing and future access opportunities to the corridor's unique coastal resources in light of increasing transportation demand. As discussed in Chapters 2 and 3, although land-use patterns are essentially established in the NCC and the majority of developable land is built-out, the corridor and adjacent regions will continue to experience population and employment growth, thereby resulting in increased demand for reliable transportation options. Demand for transport of goods and services will also continue to grow to sustain the regional, state, and national economy. This demand on the corridor's transportation network will continue to grow irrespective of implementing the TREP/PWP transportation improvements.

Also independent of the proposed TREP/PWP transportation improvements is the ever-increasing demand for public access to coastal resources from within and outside the corridor. Population growth and development in the NCC have resulted in loss of public access and recreational opportunities where access to and use of previous open spaces, beach areas, and historic trails have been eliminated due to development pressures over time. As the population continues to grow in the corridor, San Diego County and people in the adjacent regions will seek access to the remaining supply of coastal resources in the corridor, placing an additional increased demand on the region's transportation network related exclusively to coastal access.



NORTH

0 1 2 4 Miles

- I-5 Project Area
- LOSSAN Project Area
- Interstate
- State Route
- Major Arterial
- Coastal Zone Boundary
- City Boundary
- State Beach
- State Park
- National Park
- Open Space and Parks
- Proposed Bike/Pedestrian Improvements
- Proposed Direct Access Ramp (DAR)
- Proposed Park and Ride
- LOSSAN Parking and Pedestrian Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform
- Add Bus Rapid Transit
- Public Bus Route

Bicycle and Pedestrian Routes

- Primary Existing Bicycle Facility
- Secondary Existing Bicycle Facility

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

FIGURE 5.3-2

Coastal Access and Recreation Improvements (North Coast Corridor)

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

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As with most other significantly populated coastal communities in California, unmet transportation demand results in community residents, commuters, and visitors competing for limited capacity on existing transportation systems for various uses. Despite numerous coastal recreational resources and many points of coastal access in the corridor, coastal access is hindered by disjointed, congested, or limited routes for automobile, bicycle, and pedestrian routes. These issues exacerbate concerns that opportunities for public access to the coast and upland recreation areas cannot be realized due to the limited capacity of the existing transportation network.

One of the primary goals of the TREP/PWP is to implement improvements to the existing transportation system, thereby eliminating existing impediments and enhancing coastal access opportunities for residents and visitors. The TREP/PWP would improve coastal access and recreation by reducing congestion on rail and highway facilities, thus reducing competition for capacity on the existing transportation systems between community residents, commuters, and visitors. Further, the TREP/PWP would remove existing access impediments by improving mobility across all transportation modes.

To address these concerns TREP/PWP improvements would be planned and designed to maintain and enhance public access to the coast by 1) extending and improving transit service; 2) reducing transportation congestion, particularly for the variety of coastal users in the corridor; 3) providing adequate parking facilities and/or public transportation and non-automobile circulation that support access to coastal recreational areas; and 4) providing and/or enhancing recreational facilities. In addition, the TREP/PWP ensures that the proposed transportation improvements would accommodate services to coastal-dependent land use, essential public services, and basic industries vital to the economic health of the region, state, or nation.

The TREP/PWP includes measures to assure that existing and proposed transportation facilities, especially public access trails and bikeways that are bisected by existing rail and highway facilities, are constructed and/or improved and maintained for long-term integrity of coastal access and recreation opportunities. These measures would also provide for project phasing and construction activities to be designed and scheduled to minimize adverse impacts to public access and recreational resources.

Finally, as discussed in Sections 5.4 and 5.5, the TREP/PWP includes infrastructure improvements and a Resource Enhancement Program (detailed in Chapter 6) to address water quality, lagoon, and natural habitat deficiencies. These project elements would serve to protect and enhance natural resources at corridor beaches, lagoons, and recreation areas that sustain and support coastal and resource-dependent recreational uses.

5.3.2.2 LOSSAN Rail Corridor Impact Assessment

As noted in Section 5.3.2, the proposed TREP/PWP transportation improvements would not adversely affect coastal access and recreational resources. Rather, they would improve the corridor's existing transportation network to maintain access to the coast and upland recreation areas, and to enhance, wherever feasible, coastal access and recreation opportunities and facilities. Traffic congestion on I-5, which is the NCC's major coastal access thoroughfare, and the limited capacity of the rail corridor to provide an alternative means of transportation to I-5, constitute constraints on public access to the shoreline and upland recreation areas.[3]

As described in detail in Chapter 3, passenger rail services along the LOSSAN rail corridor are currently constrained by infrastructure that is significantly undersized for the volumes of traffic it

[3] *San Diego NCC–Corridor System Management Plan* (Chapter 2), July 2010.

accommodates.[4] Currently, about half of the 27 miles of rail within the NCC consists of single track, which greatly constrains the movement of trains through the corridor by causing other trains to stack at each end of single track. Stacking results in delays that in turn reduces the attractiveness of rail as a travel mode choice and as an alternative means of access to coastal resources. Since travel time and reliability are among the most important factors in the public's choice of transportation modes, longer and uncertain travel times make rail an unattractive travel option.[5]

In addition, while access to LOSSAN rail corridor stations is primarily by private automobile, constrained parking currently discourages many potential passengers from using rail. Most stations have between 300 and 400 parking spaces with the exceptions being Oceanside (about 660 spaces) and Sorrento Valley (about 120 spaces). On average, all of the station parking lots, except Oceanside, are at or exceed capacity by 8:00 A.M. Providing additional parking resources at rail stations will be a critical component to supporting increased rail use in the future.

As the proposed rail improvements are implemented throughout the corridor, access to coastal resources and recreation opportunities would be enhanced. Future rail project designs could accommodate new or improved pedestrian and bicycle amenities that provide access across the rail corridor, where determined feasible, thus providing non-automobile access from inland corridor communities to and from the coast.

As the majority of rail and transit station improvements would be located either within the existing ROW, below grade (tunnel options), or within developed areas, TREP/PWP improvements would not be expected to substantially encroach into adjacent recreational lands. Temporary impacts to public access and recreation from proposed rail improvements could occur if construction staging areas are located such that significant access routes or recreational areas are displaced and inaccessible to the public, or if construction activities substantially disrupt coastal recreational experiences, particularly during the summer when demand for coastal access is at its highest.

5.3.2.3 I-5 Highway Corridor Impact Assessment

Proposed TREP/PWP transportation improvements would improve the corridor's existing transportation network and thereby maintain access to the coast and upland recreation areas, and enhance, wherever feasible, coastal access and recreation opportunities and facilities. Planning and designing TREP/PWP transportation improvements for the highway corridor to ensure existing concerns regarding access and recreation are addressed are particularly critical when considering the following facts:

- Without full development of the region's proposed rail improvements, the region will not be able to meet travel demand in the corridor and, therefore, traffic congestion on I-5 will continue to degrade and constitute a significant constraint on public access to the shoreline and upland recreation areas.
- I-5, one of only two major north- and southbound highways in San Diego County (the other being I-15), is the corridor's major coastal access thoroughfare and the only coastal alternative to Highway 101 (Coast Highway). Coast Highway has limited opportunity to accommodate increased travel demand throughout the corridor as its potential expansion capacity is restricted by topographical constraints, including the corridor's six coastal lagoons and the shoreline. Further, because Coast Highway is subject to local traffic calming strategies, pedestrian improvements, and revitalization of historic commercial activity centers in many of the corridor's coastal cities, it

[4] *LOSSAN Final Program EIR/EIS* (Section 1), September 2007.
[5] *LOSSAN Final Program EIR/EIS* (Section 1), September 2007.

functions more as a pedestrian-oriented "Main Street" rather than a viable alternative route to I-5 for regional trips.[6]

- The beaches, lagoons, state parks, recreational facilities, and other coastal resources in the NCC are of regional and statewide importance, and the majority (approximately 70%) of coastal access to these resources is via private automobiles.[7]
- Higher traffic volumes occur during weekends than weekdays on some sections of I-5, with HOVs comprising up to 60% of the trips (compared to 13% HOV use during the weekday), demonstrating the high demand on the facility to support access to recreational and visitor destinations along the coast of San Diego.[8]

As the primary transportation corridor throughout the NCC and, in some cases, the only means of gaining access to the corridor's significant recreational resources, the proposed highway improvements would maximize the existing ROW for the benefit of those seeking access to the coast and upland recreation areas.

In addition, as proposed highway improvements are implemented throughout the corridor, coastal access and recreation enhancement opportunities would be made available. Future project designs could accommodate new or improved pedestrian and bicycle amenities that provide for access across the highway, where determined feasible, thus providing non-automobile access from inland corridor communities to and from the coast.

As the majority of highway improvements would be located either within the existing corridor ROW or within developed areas, TREP/PWP highway improvements would not substantially encroach into adjacent recreational lands; however, some linear and incremental encroachment onto adjacent recreational lands would occur. The proposed improvements would not result in any long-term adverse impacts since the function of the recreational facilities would remain.[9] Temporary impacts to public access and recreation from proposed highway improvements could also occur where construction traffic and staging areas disrupt travel patterns to the coast and inland recreation areas, particularly during the summer season when demand for coastal access is at its highest, and/or if construction staging areas are located such that significant recreational areas are displaced and inaccessible to the public, or if construction activities substantially disrupt coastal recreational experiences. These temporary impacts to public access and recreation would be localized, however, and would not disrupt corridor-wide resources at the same time.

5.3.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

The TREP/PWP includes improvements to the transportation system within the corridor and consists of rail and HOV/managed lane improvements that would encourage public transportation, carpooling, and vanpooling. The program of improvements provides for a multi-modal transportation system that would support local, regional, interstate, and international access to coastal-dependent industry, coastal and upland areas supporting recreation, various tourist destinations, and visitor-serving areas (Figure 5.3-2). In addition, the proposed transportation improvements would serve to maintain critical public-transport services for industries vital to the economy of the region, state, and nation.

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6 *San Diego NCC–Corridor System Management Plan* (Chapter 2), July 2010.
7 *San Diego NCC–Corridor System Management Plan* (Chapter 3), July 2010.
8 *San Diego NCC–Corridor System Management Plan* (Chapter 4), July 2010.
9 *I-5 NCC Project Draft EIR/EIS* (Section 3.1), June 2010.

The TREP/PWP includes no measures that would interfere with the public's right to access the shoreline, and the improvements would maximize public access and enhance recreation opportunities throughout the corridor consistent with public safety needs by:

- Improving public transportation infrastructure to support more frequent, attractive, and reliable rail, bus rapid transit (BRT), and bus transit service, resulting in increased transit ridership and reduced traffic congestion that would otherwise adversely affect the ability of the public to reach the coast along this primary coastal access corridor.
- Improving and integrating transit services with other modes of travel within the corridor to increase ridership and reduce traffic congestion that would otherwise adversely affect public coastal access.
- Providing for and encouraging non-automobile transportation with new and improved multi-modal transportation improvements that would provide access to the coast and upland recreation areas with alternative modes of transportation (trails, bicycle paths, transit, and shuttles). The TREP/PWP would provide bicycle and pedestrian facilities and routes that connect with public transit centers, thereby promoting carpooling and compatibility with BRT, and improve facilities with bicycle-friendly amenities for nearly all community streets and regional roadways that cross I-5 and the rail corridor linking to the Coast Highway and Coastal Rail Trail.
- Providing access connections from inland areas to coastal areas with reconfigured interchanges, overpasses, and underpasses (all of which would be constructed with pedestrian and bicycle facilities) and community enhancement features that would increase connectivity between neighborhoods.
- Encouraging pedestrian and bicycle access opportunities by providing separation between pedestrian, bicycle, and vehicular traffic with adequate space for walking and biking and by striping roadways.

The TREP/PWP would provide new recreational areas to, and along, the shoreline and within upland areas, and could provide and enhance low-cost visitor-serving recreation facilities by:

- Creating and enhancing pedestrian access to natural resources, including lagoons and adjacent upland areas via trail and bicycle facility improvements throughout the corridor.
- Providing transportation access to recreational and low-cost visitor-serving recreation areas for transit-dependent populations that may not otherwise be able to access coastal areas.
- Providing opportunities to potentially tunnel a portion of the rail facility, resulting in the removal of existing aboveground track and potentially creating new parkland for public use.
- Providing for an efficient and readily accessible multi-modal transportation system that could provide primary access in the region to coastal-dependent recreational resources, coastal and upland areas supporting recreation, and to various tourist destination and visitor-serving areas.

The TREP/PWP includes transportation improvements and a Resource Enhancement Program to address water quality, lagoon, and natural habitat deficiencies (discussed in more detail in Sections 5.4 and 5.5 and Chapter 6). These project elements would serve to protect and enhance natural resources at corridor beaches, lagoons, and recreation areas that sustain and support coastal and resource–dependent recreational uses.

5.3.3.1 LOSSAN Rail Corridor Opportunities

As discussed above and in Chapter 3, passenger rail services along the LOSSAN rail corridor are currently constrained by infrastructure that is significantly undersized for the volumes of traffic it accommodates, thus resulting in delays and reducing the attractiveness of rail as a travel mode choice

and as an alternative means of access to coastal resources. Proposed rail improvements would shorten travel time and improve the on-time performance and reliability of the passenger and freight rail service in the LOSSAN rail corridor. As such, improvements to the rail corridor would provide operational flexibility and increase service reliability and on-time performance of passenger rail services operating in the LOSSAN rail corridor, including COASTER, Metrolink, and Pacific Surfliner, thereby providing a more viable alternative mode of travel to the automobile.

The TREP/PWP rail improvements would benefit public coastal access by improving regional and intercity passenger rail service to provide an alternative to the private automobile, thereby relieving traffic congestion on I-5. Freight train services operated by BNSF Railway would also be improved by the proposed TREP/PWP improvements to freight rail, which would also serve to maintain an essential public service for coastal-dependent industries such as the Port of San Diego, and other major industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses.

In addition, while access to LOSSAN rail corridor stations is primarily by private automobile, constrained parking 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 can 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 ample parking supply does occur, these parking resources could also be used to support access to nearby beaches and recreation areas. Proposed TREP/PWP improvements would include expanding parking areas at 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.

The TREP/PWP includes new grade separations that would improve public access to coastal and inland recreation areas for automobiles, pedestrians, and/or bicycles at major intersections at Montgomery Avenue, Santa Fe Drive, El Portal Street, Leucadia Boulevard, and Hillcrest Drive in Encinitas. Grade separations would reduce pedestrian, bicycle, or motor vehicle conflicts along the rail corridor, which would increase both the opportunities and safety of several modes of travel to coastal and inland recreation areas without impairing the unique travel experience available from rail travel along the coast. Tunneling options for rail segments in Del Mar and San Diego could also benefit recreational resources as tunneling could result in the removal of existing aboveground track where new parklands could be created for public use.

5.3.3.2 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements shall be designed and implemented to ensure maximum protection and, where feasible, enhancement of public access to coastal and inland recreational resources in the TREP/PWP corridor, consistent with public safety and sensitive coastal resource needs. Because project-level analysis for proposed rail improvements will not occur until project alternatives are chosen, preliminary design, engineering, and resource impact analyses have been developed, and mitigation measures and monitoring plans prepared, the analysis contained herein for the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary impact assessment associated with coastal access and recreation, and design and development strategies to address coastal public access and recreation. The following design and development strategies provide

guidance in addressing coastal access and recreation for specific rail development projects, and as proposed rail improvement plans are further developed, additional design and development strategies to address potential impacts to coastal access and recreational use areas would be evaluated by the Lead Agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. To ensure a balanced approach to multi-modal transportation system improvements, TREP/PWP project implementation and phasing should be carried-out consistent with phasing procedures and requirements provided in Chapter 6, Preliminary Phasing and Implementation Plan.
2. Project-level analysis for potential coastal access and recreation impacts of rail improvements should confirm that proposed rail improvements will minimize, to the maximum extent feasible, substantial impacts to coastal access and recreation resources. Should project-level analysis find that previously unidentified permanent or temporary impacts to coastal access and recreational resources will result from proposed rail improvements, additional study of feasible avoidance and mitigation measures to ensure project consistency with applicable Coastal Act public access and recreation policies should be achieved during future, project-specific Federal Consistency review.

5.3.3.3 I-5 Highway Corridor Opportunities

As described in detail in Chapter 3, congestion on I-5 currently impedes travel and, as the corridor's primary coastal access facility, existing congestion on I-5 adversely affects the public's ability to travel to the NCC's significant recreation areas. While travel in the corridor has increased in the last several decades, I-5 infrastructure has remained relatively constant during that time, with little physical expansion to meet increasing travel demand. To address the highway capacity deficiency in the corridor in a way that would provide the most benefit to coastal access and natural resources while meeting regional travel demand, TREP/PWP highway improvements would accommodate more travelers (i.e., more people), more efficiently, and with minimal facility expansion (footprint) when compared to other transportation alternatives. The TREP/PWP recognizes that constructing new transportation corridors or new general-purpose lanes to meet travel demand would not solve the highway capacity deficiency without affecting adjacent communities, lagoons and habitat areas, and, potentially, resulting in increased emissions and reduced air quality. HOV and managed lanes would provide significantly more person-carrying capacity per lane than a general-purpose lane by promoting carpool, vanpool, and other transit alternatives to SOVs in the corridor. Further, higher occupancy and managed lanes would specifically serve the majority of recreational travelers on the weekend (60% of which utilize HOVs), thus reducing congestion on I-5 and improving access opportunities to the coast and inland recreation areas. In addition, TREP/PWP transportation improvements would reduce traffic congestion on I-5 in the corridor, thereby alleviating the pressure to construct new transportation corridors, or accommodate vehicles on the Coast Highway and other arterial streets that may otherwise require widening to accommodate existing and future transportation demands, which would significantly affect a variety of coastal resources, communities, and public recreational areas.

Additional benefits to public access would occur from the proposed transit center that would be located at Manchester Avenue in Encinitas. The proposed transit center would include a new access road, parking for 400 cars, and a bus platform, all of which would facilitate ride-sharing and bus transportation. Traffic congestion on I-5 presently discourages many potential ride-share and bus transit transportation options, as these modes of travel are subject to the same traffic congestion that SOVs experience. The combination of increased support facilities for these modes of transportation and the proposed HOV/managed lanes would provide incentive for people to shift to ride-sharing and public transit where these vehicles would have direct access to the uncongested HOV/managed lanes

where reduced travel times and reliability for residents, commuters, and recreationists would be assured.

Beneficial impacts to coastal access and recreation would also result from highway improvements that include reconstructing under- and overpasses to better connect and improve bicycle and pedestrian routes to the coast. These improvements would address travel-user separations to provide a more comfortable travel environment for pedestrians and bicyclists to further encourage these modes of travel across I-5 between inland and coastal areas, and in certain instances, would provide a connection to regional corridors and Class I and Class II bicycle facilities[10] accessed throughout the NCC.

In addition, parcels that are purchased for highway widening (but not required for use as permanent state ROW) could be considered for community pocket parks or public open space at the request of the local agencies. The TREP/PWP also includes a Resource Enhancement Program, discussed in more detail in Sections 5.4 and 5.5 and Chapter 6, which would involve acquisition and habitat enhancement of properties in the corridor that would be maintained as natural open space areas, thereby enhancing resources that would be accessible from travelers in the corridor and from surrounding areas.

Further, the TREP/PWP includes the *I-5 North Coast Community Enhancement Plan* (January 2008), which includes community enhancement project concepts that, if implemented, would substantially benefit the corridor's pedestrian and bicycle recreational uses. The proposed community enhancement projects were identified and developed in close coordination with affected communities through coordinating project-development team meetings, developing preliminary design concepts, meeting with city officials and community stakeholders, and hosting community workshops.

Implementing community enhancement projects would depend on cooperation between members of the community, city officials, and the Caltrans design team. Pursuant to a cooperative agreement between Caltrans and the affected cities, Caltrans would construct the community enhancement projects throughout the I-5 corridor as part of highway construction, and maintenance agreements would be organized with each city, allowing future maintenance to become the responsibility of the local jurisdiction.

Generally, community enhancement projects consist of developing and/or enhancing community parks, educational centers at lagoons, wetland restoration, open space buffers, pedestrian and bicycle trails, mini-parks, enhanced view corridors, and improved scenic vista points within the five affected cities. These improvements would substantially enhance recreational opportunities in the corridor, while improving travel choices, by creating and completing linkages between communities, inland and coastal areas, and access opportunities to the corridor's regionally significant natural resource and recreation areas. Below is a summary list of project concepts included in the *I-5 North Coast Community Enhancement Plan*. Community-enhancement design concepts are discussed in more detail in Chapter 4 and are described and depicted in the *I-5 North Coast Community Enhancement Plan*.

City of San Diego (Figure 5.3-3)

- **Los Peñasquitos Creek Trail Connection** would include constructing a trail connection under the highway structures in the Caltrans ROW from Peñasquitos Creek to Sorrento Valley Road to create

[10] SANDAG's *Draft San Diego Regional Bicycle Plan* (March 2010) defines Class I bikeways as "Bike Paths," which are physically separated from vehicular traffic, and Class II bikeways as "Bike Lanes," which include pavement markings and signage used to allocate a portion of the roadway for exclusive or preferential bicycle travel.

a better linkage between the Sorrento Valley COASTER Station, the residential and commercial developments near Sorrento Valley Road, and the existing trails at Peñasquitos Creek.

- **Carmel Valley Bicycle/Pedestrian Trail Connection** would provide a new paved bicycle/pedestrian trail, providing access to the lagoon and the ocean and creating a link to the proposed Carmel Valley park and ride trailhead.
- **Enhanced Park and Ride at Carmel Valley Road** would improve paving leading to the trailhead with a scenic overlook at Los Peñasquitos Lagoon.
- **Pedestrian Overpass North of Del Mar Heights Road** would provide a bicycle and pedestrian bridge over I-5 with new sidewalks.

City of Solana Beach (Figure 5.3-4)

- **Streetscape Enhancements on Ida Avenue from Academy Drive to south of Genevieve Street** would include adding a sidewalk on the west side, curbs, street tree plantings, slope plantings, parkway planting where space permits, irrigation to support proposed plantings, and design and grading features to minimize the impact of a retaining wall.
- **Trailhead at Solana Hills Drive with interpretive outlook over San Elijo Lagoon** would include street improvements along the northern end of Solana Hills Drive, constructing a new trailhead at the south entrance providing access to San Elijo Lagoon Ecological Reserve, street trees, and various public amenities. Improvements would include the installation of a parking area on the east side of Solana Hills Drive; a paved pedestrian drop-off zone to facilitate trail access; an ADA-accessible ramp to a shade structure, picnic tables, litter receptacles, interpretive displays and information board; and other amenities to support trailhead use.

City of Encinitas (Figure 5.3-5)

- **Manchester Avenue Pedestrian Bridge and Trail** would include a new trail and associated sidewalk improvements under the I-5 bridge structure at Manchester Avenue across San Elijo Lagoon with 1) paving and guardrails to improve the trail adjacent to the south bridge abutment with connecting trails on the east and west highway slopes; 2) a pedestrian walkway structure across San Elijo Lagoon suspended from the west side of the widened highway bridge; and 3) streetscape improvements on Manchester and a sidewalk on the south side. The new trail and associated sidewalk improvements would be constructed under the I-5 bridge structure at Manchester Avenue across San Elijo Lagoon, connecting existing trail segments currently separated by the lagoon and highway, and providing a linkage to the El Camino Real Regional Bicycle Corridor (and future City trail along Manchester Avenue) identified within the San Diego Regional Bicycle Plan as a Class II facility. The east-west trail connection would join the existing trails on the shores of the San Elijo Lagoon south of Manchester Avenue. The north-south connection would span the open water of the lagoon, connecting to the east-west sidewalk on Manchester Avenue.
- **Villa Cardiff Drive Improvements** would include sidewalks and trails connecting the Hall Property Park with the east side of the highway across MacKinnon Bridge and south along Villa Cardiff Drive, and enhancing the Birmingham Drive and Villa Cardiff Drive park and ride with park-like amenities, new trees, and a pedestrian connection to the north.

FIGURE 5.3-3: CARMEL VALLEY BICYCLE/PEDESTRIAN TRAIL CONNECTION AND ENHANCED PARK AND RIDE (CITY OF SAN DIEGO)

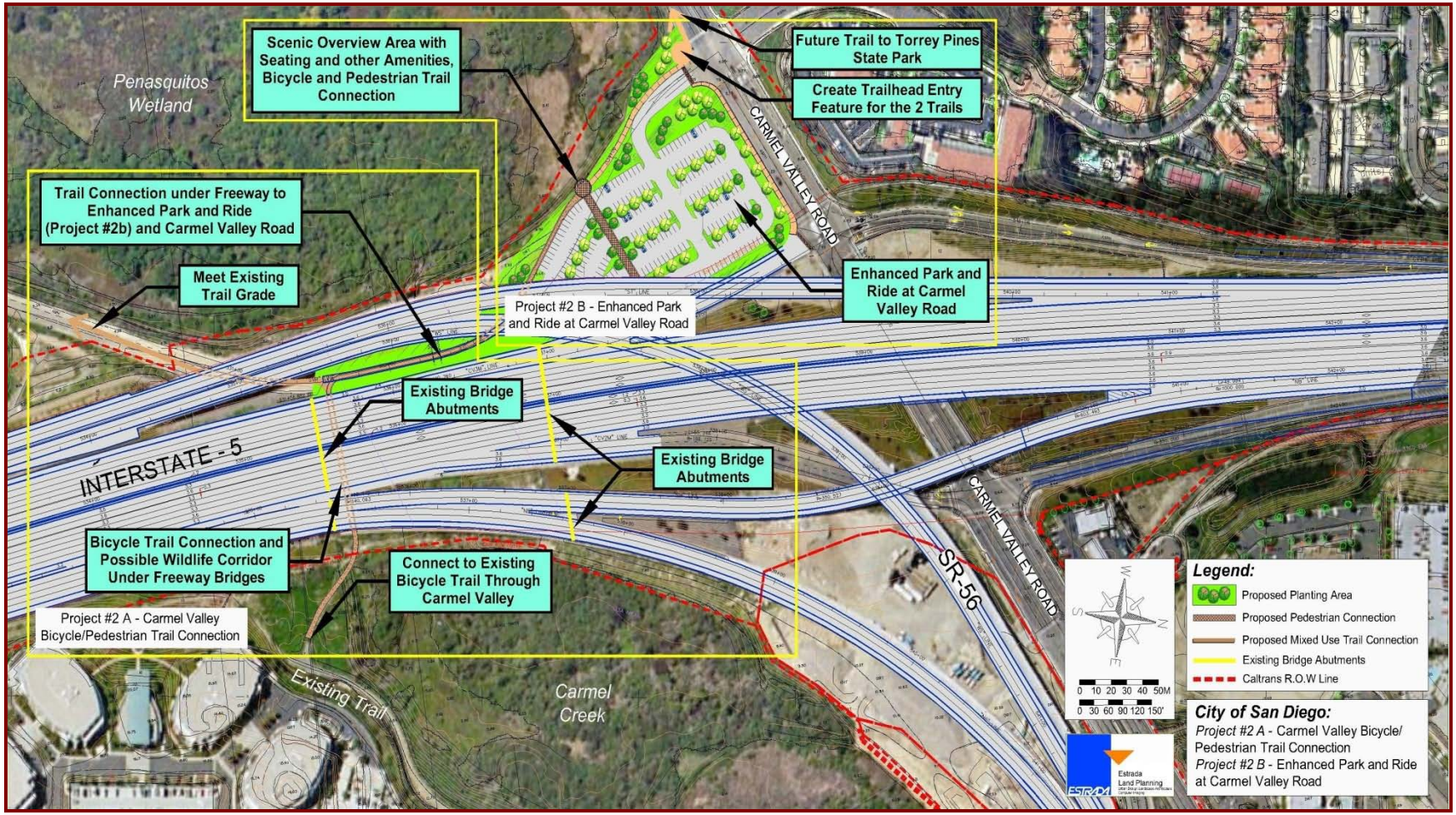


FIGURE 5.3-4: TRAILHEAD AT SOLANA HILLS DRIVE (CITY OF SOLANA BEACH)

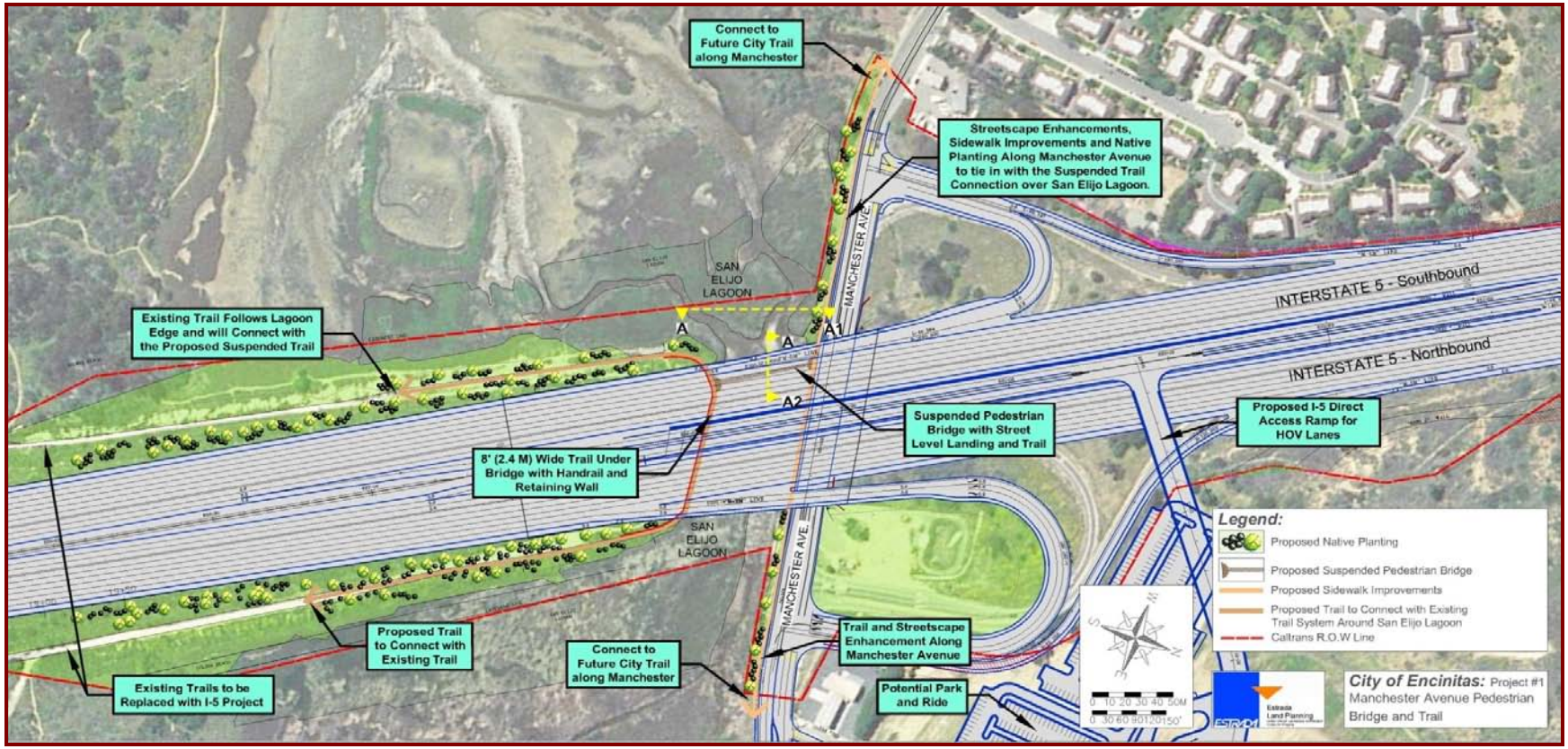
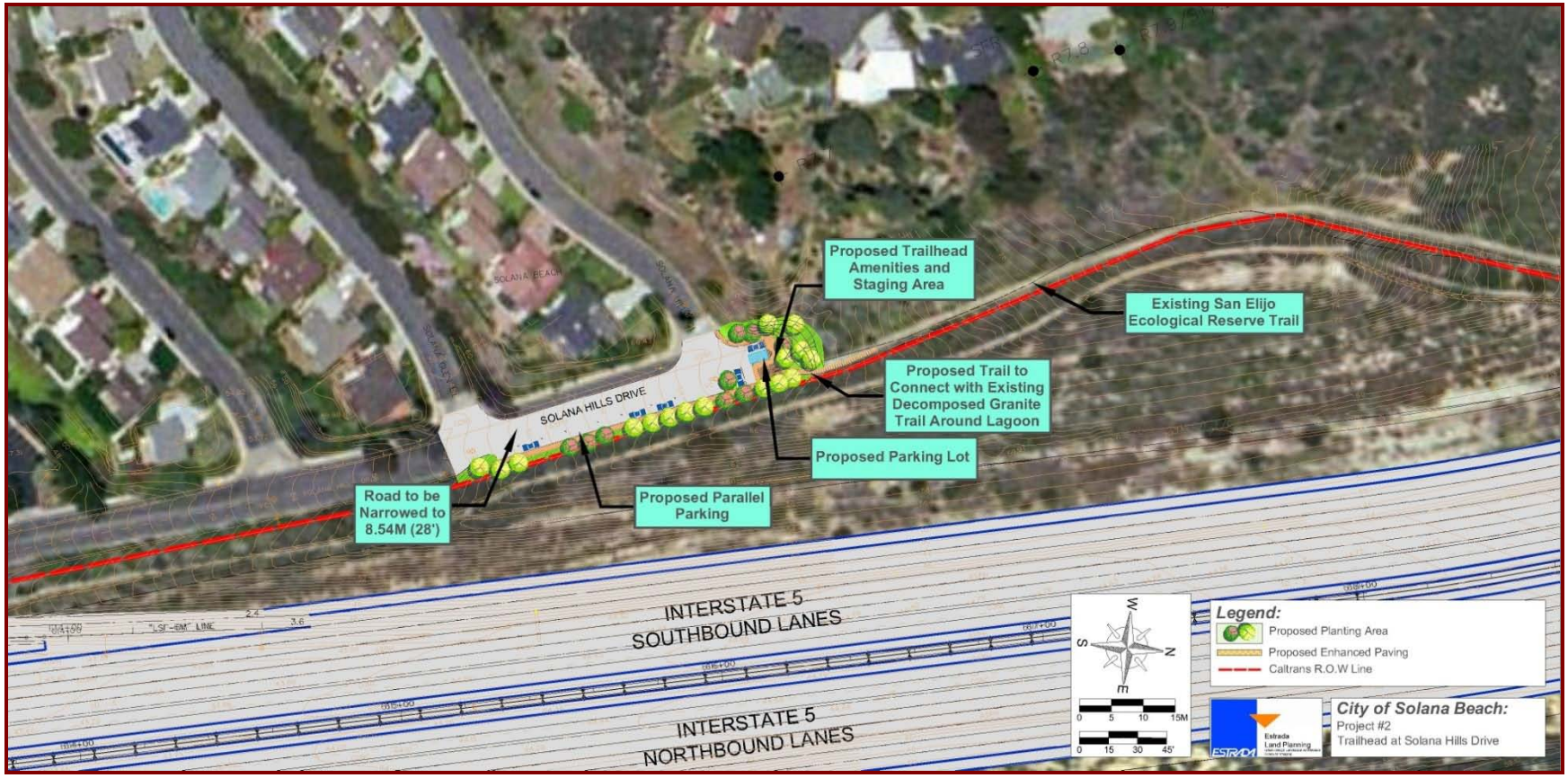


FIGURE 5.3-5: MANCHESTER AVENUE PEDESTRIAN BRIDGE AND TRAIL (CITY OF ENCINITAS)



- **Hall Property Park Trail Connecting to Santa Fe Drive** would provide more direct and attractive access, with way-finding sights and plantings, to the park from neighborhoods east of I-5. The improvement would provide a pedestrian connection between the Hall Property Park and Santa Fe Drive, allowing pedestrians from the neighborhoods to the east of I-5 to walk more directly to the park through a thematic landscape setting. This linear park connection would be located between the proposed highway on-ramp and the parking facilities of the existing commercial lot to the west.
- **Trail Connecting Santa Fe Drive to Requeza Street with Wetland Revegetation** would connect Santa Fe Drive on the southern edge and Requeza Street on the north and include improved drainage and wetland vegetation restoration. The improvements would include a north-south trail connection on the east side of I-5 between Santa Fe Drive on the southern edge and Requeza Street on the north, which would allow pedestrians and bicyclists to go from Santa Fe Drive to Requeza, thereby creating a connection to the trail improvements of the Hall Property Park Trail and connecting to Santa Fe Drive on the south and the Requeza Street to Encinitas Boulevard trail connection (described below) on the north. This would allow residents north of Santa Fe and east of I-5 to readily access the Hall Property Park.
- **Trail Connecting Requeza Street to Encinitas Boulevard** would provide a new trail along the east side of I-5 connecting Requeza Street with Encinitas Boulevard, and would improve the linkage to the Encinitas-San Marcos Regional Bicycle Corridor, identified by the San Diego Regional Bicycle Plan as a Class II facility.
- **Union Street Pedestrian Overpass and Trail Connection with Wetland Revegetation** would connect Cottonwood Creek Park to Union Street, and a bridge would provide pedestrian access across I-5 with a new park located at the western end of the pedestrian bridge on a vacant parcel owned by the City of Encinitas.

City of Carlsbad (Figure 5.3-6 and Figure 5.3-7)

- **Park and Ride Enhancement/Nature Center at La Costa Avenue** would provide a nature center, lagoon overlooks, interpretive displays, and additional parking at La Costa Avenue on the east side of I-5, developed in concert with the Batiquitos Lagoon Foundation.
- **Trail on East Side of I-5 at Batiquitos Lagoon** would link the new nature center on the south side of the lagoon to the trails on the north side of the lagoon and the west side of I-5. The trail improvements would allow hikers to complete the loop trail circuit around the lagoon.
- **Trails on West and East Side of I-5 at Agua Hedionda Lagoon** would improve access to the lagoon by providing a pedestrian bridge beside the existing rail bridge (spanning the mouth of the lagoon) and creating a loop around the lagoon. The proposed bridge would connect to the Coastal Rail Trail system, currently being developed by the City of Carlsbad, and would also include a trail crossing from east to west following the southern shore of the lagoon.
- **Streetscape Enhancements on Chestnut Avenue** would improve existing pedestrian facilities along Chestnut Avenue by including widened sidewalks with street trees and planting buffers, safety lighting for the underpass, and public artwork.

City of Oceanside (Figure 5.3-8)

- **Pocket Park and Pedestrian Access at California Street** would enhance the existing California Street Overpass by providing new landscaping, a pocket park at Moreno Way and I-5, and widened sidewalks.
- **Oceanside Boulevard Pedestrian Streetscape Enhancement** would include sidewalk and landscape improvements under and adjacent to the I-5 overpass, including improved fences along the SPRINTER tracks, and enhanced plantings, lighting, and public artwork.

FIGURE 5.3-6: PARK AND RIDE ENHANCEMENT/NATURE CENTER AT LA COSTA AVENUE (CITY OF CARLSBAD)

FIGURE 5.3-7: AGUA HEDIONDA TRAIL IMPROVEMENTS (EAST SIDE) (CITY OF CARLSBAD)

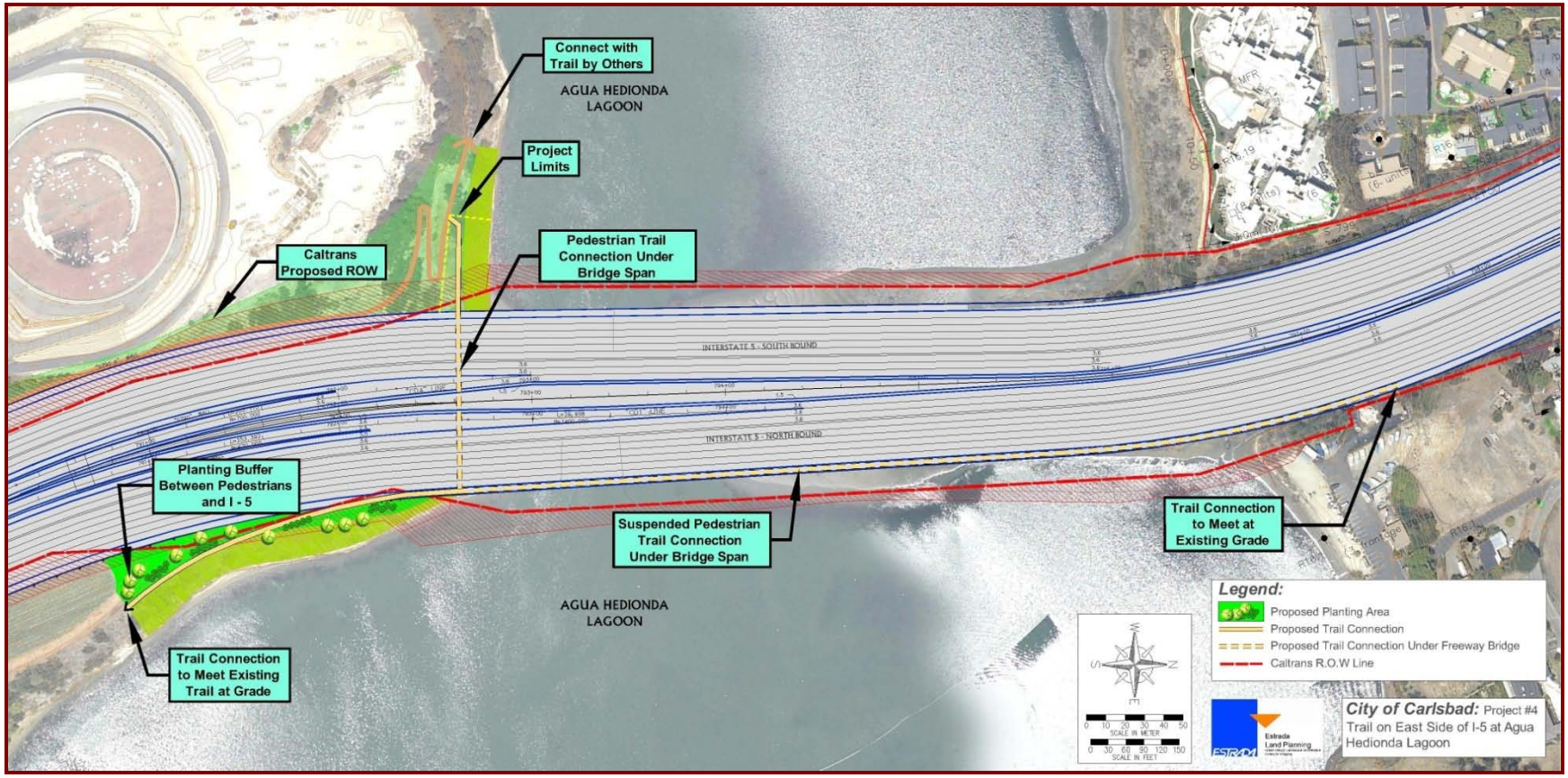
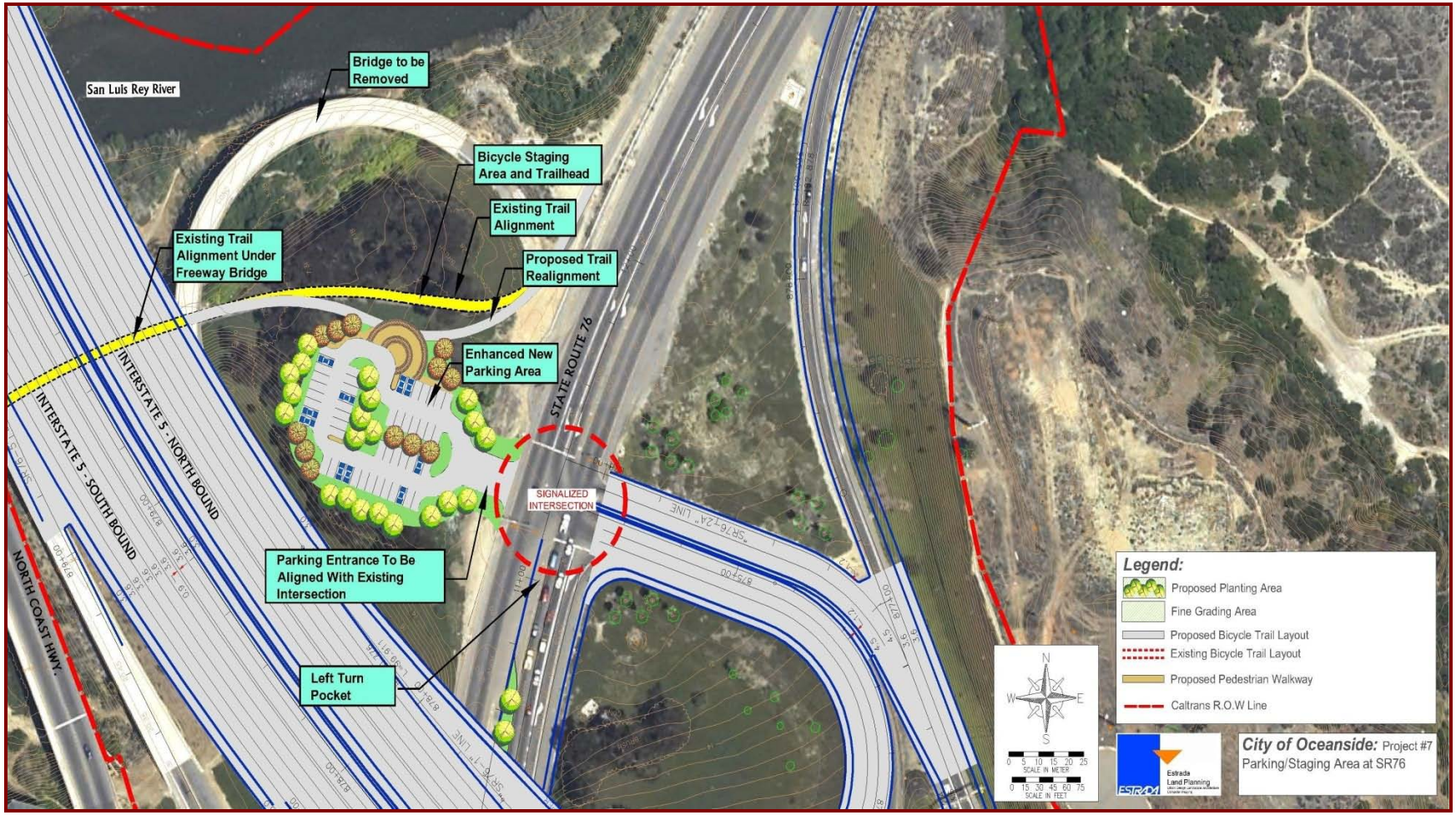


FIGURE 5.3-8: PARKING AND STAGING AREA AT SR-76/SAN LUIS REY RIVER (CITY OF OCEANSIDE)



- **Enhancements to Division Street Overpass** would include widening of the existing pedestrian overpass enhanced with special paving and landscaping, and new sidewalks and street trees that would enhance Brooks Street going north.
- **Enhanced Pedestrian Overpass Connection on Mission Avenue** would provide wider and more direct pedestrian routes as well as realignment of the highway on- and off-ramps to allow for signalized pedestrian crossings.
- **Enhanced Pedestrian Overpass Connection on Bush Street** would connect existing community gardens at Civic Center Drive and Witzel Street with new and widened sidewalks, community garden plots, a paved trail from the east side of the bridge along the on-ramp to Buena Street, and new and improved lighting and landscaping.
- **Community Open Space Park** would provide for parcels acquired as part of the I-5 widening to be converted to a shared-use park for the City and the Family Recovery Center, which could include meandering paths, water features, detailed native plantings, and public artwork.
- **Parking/Staging Area for Recreation at SR-76** would include a new parking area, a trailhead staging area, and other support amenities to support improved physical and visual access to the existing San Luis Rey bike path, a local and regional Class I facility.
- **Pedestrian Underpass Improvements at San Luis Rey River** would include a widened sidewalk, ADA-compliant ramp connections, improved lighting and planting, and public artwork.
- **Regional Gateway Feature at Harbor Drive** would include creative paving, evocative landscaping, and structures to reflect regional identity as an entry to Oceanside and the county.

5.3.3.4 I-5 Highway Corridor Policies and Implementation Measures

Caltrans would implement the following policy and implementations measures to ensure that proposed improvements are designed, implemented, and maintained to provide for maximum protection of public access to the coast and recreational use areas. Notice of Impending Development (NOID) submittals for highway, community, and resource enhancement project implementation that would potentially affect public access to coastal resources would demonstrate compliance with the following policy and implementation measures.

Policy 5.3.1: Maximum public access to coastal and inland recreational resources in the TREP/PWP planning area shall be protected, and where feasible, enhanced, consistent with public safety and sensitive coastal resources needs.

Implementation Measure 5.3.1: To ensure a balanced approach to multi-modal transportation system improvements, TREP/PWP project implementation and phasing should be carried-out consistent with phasing procedures and requirements provided in Chapter 6, Preliminary Phasing Plan, and all relevant NOID procedures.

Implementation Measure 5.3.2: NOID submittals for individual highway, community, and resource enhancement projects located within or directly adjacent to an existing public coastal access or recreation area (trail or parkland) should include a description of features included in the project and should detail the type and location of mitigation elements included in the project, which avoid and/or minimize potential temporary construction impacts to coastal access and recreation.

NOID submittals for community enhancement projects should include a cooperative maintenance agreement with the affected City.

Implementation Measure 5.3.3: NOID submittals for individual highway, transit and community enhancement projects should include a final construction schedule identifying dates for project

construction which should be scheduled, to the maximum extent feasible, to avoid adverse effects on traffic flow on Interstate 5 by closure of no more than one lane in either direction of Interstate 5 during peak travel hours.

Implementation Measure 5.3.4: NOID submittals for individual highway, transit and community enhancement projects should include a Demolition, Staging, Storage, Fueling, and Debris/Excess Graded Material Disposal Plan which should include provisions and requirements designed to ensure that public access pedestrian and bike trails and/or public recreation areas are not adversely affected by these elements of project activities, and that the footprint of disturbance associated with these activities is the minimum possible, in accordance with Caltrans' proposal. No fencing or other barriers except as specifically authorized pursuant to an approved NOID should be placed in a location that would limit public access to pedestrian or bike trails or other public recreation areas.

5.3.4 Coastal Act Consistency

The Coastal Act contains numerous policies that address protection and enhancement of public access and recreation opportunities.

> Coastal Act Section 30210
>
> 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.
>
> Coastal Act Section 30211
>
> Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.
>
> Coastal Act Section 30212
>
> 30212(a) provides that in new shoreline development projects, access to the shoreline and along the coast shall be provided except in specified circumstances, 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.
>
> Coastal Act Section 30212.5
>
> Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Coastal Act Section 30213

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

Coastal Act Section 30214

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

(1) Topographic and geologic site characteristics.

(2) The capacity of the site to sustain use and at what level of intensity.

(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.

(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

Coastal Act Section 30223

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

Coastal Act Section 30252

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, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Coastal Act Section 30254

New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

5.3.4.1 LOSSAN Rail Corridor Consistency Analysis

As planned and designed, the system of proposed TREP/PWP transportation improvements would inherently result in substantial benefits to coastal access and recreation. 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 the coast. Proposed TREP/PWP improvements would contribute substantially to enhancing multi-modal 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 rail stations to support access to nearby beaches and upland recreational areas. Proposed grade separations along the LOSSAN rail corridor would provide new or improved, convenient pedestrian and bicycle crossings over the tracks, better connecting communities to area beaches.

The LOSSAN rail corridor design and development strategies ensure that coastal access and recreational resources would be considered in the planning and design for the rail corridor improvement projects so that maximum public access to coastal and inland recreational resources in the TREP/PWP corridor would be protected, and where feasible, enhanced, consistent with public safety and sensitive coastal resources needs. The TREP/PWP requires that transportation system improvements be implemented in a balanced manner to ensure that the maximum benefit of the multi-modal program be realized. Implementation measures further require that project-level analysis for rail corridor improvements evaluate potential coastal access and recreation impacts and confirm that proposed rail improvements avoid substantial impacts to coastal access and recreation resources, or that additional study and mitigation measures be implemented if potential impacts are identified. In the event that additional study is required to address previously unidentified potential impacts, project consistency with applicable Coastal Act public access and recreation policies would be achieved during future, project-specific federal consistency review, where applicable. TREP/PWP project implementation and phasing would be carried-out consistent with phasing procedures and requirements provided in Chapter 6, Implementation to further ensure a balanced approach to multi-modal transportation system improvements.

5.3.4.2 I-5 Highway Corridor Consistency Analysis

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 TREP/PWP improvements focusing on HOV/managed 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 TREP/PWP program ensures that the corridor's large and varying customer base of HOVs, many of which are seeking access to coastal resources, would be provided with a reliable transportation corridor.

Implementation of the proposed highway improvements would significantly enhance public access to the coast and inland recreational resources. Without the proposed I-5 project, coastal access is expected to continue to degrade because of projected population growth and constrained facilities, resulting in a substantial increase in congestion on the region's primary access corridor to the coast.

Proposed highway improvements would include public transportation infrastructure to support more frequent, attractive, and reliable bus transit services, including BRT, which would result in higher transit ridership and reduced traffic congestion that would otherwise adversely affect the ability of the public to reach the coast along this primary coastal access corridor. Proposed improvements would encourage non-automobile transportation with new and improved multi-modal transportation improvements that would provide access to the coast and recreation areas via trails, bicycle paths, and transit. Improved bicycle and pedestrian facilities and routes would better connect with public transit centers, thereby promoting carpooling and compatibility with BRT. Such improvements would not only facilitate multi-modal access to the coast, but would also provide multi-modal access to recreational and low-cost visitor-serving recreation areas for transit-dependent populations that may not otherwise have the means to access coastal areas.

Proposed highway improvements would include reconstructing under- and overpasses, which would present an opportunity to connect and improve local and regional bicycle and pedestrian routes to and from the coast. Additionally, new and enhanced access routes across lagoons would be similarly integrated into highway improvements. These TREP/PWP components would serve to meet one of the primary goals, as articulated in *Completing the California Coastal Trail*, which is to "Create linkages to other trail systems and to units of the State Park system, and use the Coastal Trail system to increase accessibility to coastal resources from urban population centers." TREP/PWP implementation would provide and connect several threads within the coastal trail system between inland and coastal communities access the shoreline, lagoons and upland recreation, thus helping to achieve the goals of *Completing the California Coastal Trail*. TREP/PWP implementation measures would require that transportation system improvements be implemented in a balanced manner to ensure that the maximum benefit of the multi-modal transportation improvements program is realized. TREP/PWP implementation measures would address design criteria of new pedestrian and bicycle amenities to ensure appropriate separation of vehicular, pedestrian and bicycle facilities to provide a more comfortable travel environment for pedestrians and bicyclists to further encourage these modes of travel across I-5 between inland and coastal areas.

As described in Sections 5.1 and 5.2, the proposed TREP/PWP includes improvements to public transportation facilities necessary to serve and support existing and future land uses previously approved by the Coastal Commission pursuant to certified LCPs and/or approved coastal development permits. The proposed transportation improvements would not result in excessive growth-inducing impacts that could result in overburdening the corridor's recreational resources. As such, TREP/PWP improvements would not be growth-inducing, nor would the proposed transportation improvements substantially increase VMT or exacerbate existing congestion problems on I-5.

TREP/PWP highway policies and implementation measures would ensure that maximum public access to coastal and inland recreational resources in the NCC be protected and enhanced consistent with public safety and sensitive coastal resources needs. The TREP/PWP would be carried-out consistent with phasing procedures and requirements provided in Chapter 6 to ensure a balanced approach to

multi-modal transportation system improvements. The phasing procedures and requirements included in Chapter 6 identify project phasing and implementation priorities as guidance for rail improvements, and provide the mechanism to track the progress of rail corridor project implementation in the context of all other TREP/PWP highway, community and resource enhancement project implementation. The procedures also provide for maximum flexibility in implementing all TREP/PWP improvements to accommodate opportunities and uncertainties in potential future funding availability and local, state, and federal political and policy decisions, while ensuring that projects are implemented in a way that balances rail and highway improvements, and that community and resource enhancements are implemented prior to, or concurrent with, project implementation.

Implementation measures would further address potential public access and recreation impacts associated with construction activities, including construction scheduling, to avoid impacts to access during the summer season, and staging to minimize displacement of recreational areas and/or interference with access routes.

5.3.4.3 Coastal Act Consistency Analysis Summary

While the NCC provides unique and varying recreational opportunities, population growth and decades of private development in the region have diminished these opportunities. As the region's population has expanded and open lands, beaches, and historic trails have become developed, more people have sought the use of the corridor's coastal recreation resources. In addition, many critical support facilities for access and recreation have been affected as available transportation, transit, parking, and other amenities have become overburdened and have become difficult to accommodate or expand given the shrinking supply of land available to provide for such facilities. Thus, improving and maintaining overall mobility in the corridor is critical to removing existing transportation impediments to coastal access and meeting future demand for access to coastal and upland recreation opportunities. Moreover, coastal access is expected to continue to degrade because of projected population growth and constrained facilities. The TREP/PWP would prevent or reduce significant adverse impacts to coastal access compared to a No Build Alternative. NCC program improvements would provide a multi-modal transportation system, providing reliable access to and from coastal-dependent industry and coastal and upland areas in the corridor and entire San Diego region, and would thereby affirmatively implement Coastal Act policies that require maximum protection and, where feasible, enhancement of coastal access and recreation. Finally, as discussed in Sections 5.4 and 5.5, the TREP/PWP includes improvements and a Resource Enhancement Program (detailed in Chapter 6) to address water quality, lagoon, and natural habitat deficiencies. These project elements would serve to protect and enhance natural resources at corridor beaches, lagoons, and recreation areas that sustain and support coastal and resource-dependent recreational uses.

5.3.5 Local Coastal Program Consistency

Appendix A includes a detailed policy consistency analysis matrix for each certified LCP area that would be affected by the proposed highway corridor improvements, and by those rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and thus fall under the exclusive jurisdiction of the Surface Transportation Board (STB), the LCP policy consistency analysis may provide guidance or background information for analyzing rail project consistency with Sections 30210, 30211, 30212, 30212.5, 30213, 30214, 30223, 30252, and 30254 of the Coastal Act, as appropriate and applicable (see Section 1.1.3 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). All of the LCPs include policies that mirror, in part, the Coastal Act's policies addressing public access and recreational resources; however, the certified

LCPs also include a range of additional, detailed, and site-specific policies and development standards that address protection, enhancement, and potential impacts to public access and recreational resources. As such, the corridor's LCP access and recreation policies are summarized with brief city-specific consistency analyses below, which also integrate and supplement the consistency analysis for Coastal Act sections listed above. A complete list of LCP policies and corresponding consistency analysis is included in the LCP Policy Consistency Analysis matrix for each city (Appendix A).

5.3.5.1 Local Coastal Program Consistency Analysis Summary

Each of the corridor's LCPs has explicit policies and/or development standards that address public access and recreation. Common policies and/or development standards that reflect the provision and enhancement of public access and recreational opportunities throughout all of the corridor's LCPs:

- Encourage the preservation, protection, and provision of a full range of recreational areas distributed throughout the area; preferably low-cost visitor and recreational facilities.
- Encourage bicycle and pedestrian access to recreation facilities, including providing bicycle racks.
- Encourage the use of appropriate public lands and facilities for park and recreation purposes to the maximum extent feasible consistent with the maintenance of natural resources.
- Protect and improve existing physical access to the shoreline and ocean.
- Preserve where possible, open space such as beaches, parks, cliffs, tidepools, coastal waters, and canyons.
- Pursue development of a transportation system, including use of bus, light rail, shuttle service and bicycles that would provide access to the ocean, recreational areas, and commercial centers, which would provide alternatives to private automobile use.
- Provide and maintain an inter-linking network of trails for horseback riding, hiking, and bicycling compatible with open space goals and the transportation system to allow for commuter and recreation desires.
- Provide for the needs of pedestrians in all future design and development decisions (including roadways for pedestrians, bicyclists and vehicular traffic), including traffic control measures and pedestrian crossings where necessary, thus minimizing areas of conflict between pedestrians, bicycles, and vehicular traffic.
- Implement an effective system of signing (including design, construction, and maintenance of signs) for new and existing accessways, specifically shoreline access and parking signing.
- Give priority to visitor-serving commercial recreation facilities over private residential, general-industrial or general-commercial uses.
- Provide a network of transportation systems that is integrated, complementary, and compatible with other citywide and regional goals, which would link the entire community to all of its own activity areas and to the San Diego metropolitan area as a whole.

The proposed TREP/PWP's primary goal is to maintain and improve multi-modal transportation opportunities in the NCC. Proposed improvements would create and enhance features for an efficient and integrated transportation program by increasing rail, carpooling, and public transit capacity within the corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. The project includes bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods, and connect inland and coastal areas and recreation opportunities. As such, the TREP/PWP is consistent with these policies. Moreover, coastal access is expected to continue to

degrade because of projected population growth and constrained facilities. The TREP/PWP would prevent or reduce significant adverse impacts to coastal access compared to a No Build Alternative.

City of San Diego

The City of San Diego LCP contains specific policies in the North City Land Use Plan, in addition to each of the individual Community Plans, which require protection and enhancement of public access and recreation for particular recreational resources in the city.

North City Local Coastal Program – Land Use Plan

Torrey Pines

- Designate and preserve as open space the exceptional topography and ecosystem in this community, including Los Peñasquitos Lagoon, Torrey Pines State Park Reserve areas, Crest Canyon, San Dieguito Valley, and the sandstone cliffs overlooking San Dieguito Valley.
- Permit only those recreational activities that do not have a negative impact on lagoon ecosystems or on the environment of the Torrey Pine tree.
- Encourage and support the development of a mass transportation system to serve the San Diego region and specifically the Torrey Pines area.
- Develop a system of bikeways, pedestrian ways, and horse trails compatible with the open space goals and transportation system to allow for commuter and recreation desires.
- Continue the cooperative working relationship with the MTD Board and SANDAG in the planning and implementation of a fixed bikeway system for San Diego.

North City West

- Provide separate systems for pedestrian and bicycle traffic.
- Connect individual neighborhoods (via the community mass transit system) with the town center, industrial/office park, and high school.
- Establish alternative transportation modes for public access to the shoreline, particularly to be considered and implemented during peak-use periods and the summer months, as suggested by the SANDAG Coastal Access Report of 1978.
- Pursue development of a system of bike trails that will connect major activity areas such as the university to the town center, the proposed commercial center in North City West, and the recreational centers of the area, with a focus on the ocean and natural scenic corridors.
- Pursue development of a transportation system (including use of bus, light rail, shuttle service, and bicycles) that will provide access to the ocean, commercial centers, and the university. Parking areas should be identified primarily inland; however, emphasis should not be placed on the automobile.
- Pursue development of alternative transportation systems during the earliest stages of development of North City West to eliminate unnecessary traffic congestion and encourage the use of public transit and other transportation modes by future residents.
- Pursue expansion of existing bike paths to include Cannel Valley Road and Sorrento Valley Road.

University-La Jolla

- Provide maximum protection to the Torrey Pines Natural Preserve.
- Develop a linkage system to connect recreational and natural open space areas throughout the community.

University Community Plan

- Improve accessibility and use relationships within the community by establishing well-defined, multi-modal linkage systems.
- Establish standards that give physical design direction to private developments and public improvements.

Torrey Pines Community Plan

- Require that Transportation Demand Management strategies are implemented within the Sorrento Valley industrial area. Provide bicycle racks/lockers, showers, and locker room facilities for employees who bike or walk to work.

The proposed TREP/PWP would create and enhance features for an efficient and integrated transportation program by increasing rail, carpooling, and public transit capacity within the city and corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. Improvements would include bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods, and connect inland and coastal areas. TREP/PWP improvements would include constructing a trail connection under the highway structures in the Caltrans ROW from Peñasquitos Creek to Sorrento Valley Road to create a better linkage between the Sorrento Valley COASTER Station, the residential and commercial developments near Sorrento Valley Road, and the existing trails at Peñasquitos Creek. The proposed Carmel Valley bicycle/pedestrian trail connection would provide a new, paved bicycle/pedestrian trail, providing access to the lagoon and the ocean, and creating a link to the proposed Carmel Valley park and ride trailhead. In addition, the proposed project would enhance park and ride facilities at Carmel Valley Road, which would include improvement of pavement leading to the trailhead with a scenic overlook at Los Peñasquitos Lagoon.

The public access and recreational resource protection policies of the City of San Diego LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore these policies would not need to be amended to implement the proposed transportation improvements. The proposed TREP/PWP is consistent with all relevant City of San Diego LCP public access and recreation policies; no LCP policy amendments are required.

City of Del Mar

The City of Del Mar LCP includes policies that provide guidance in analyzing potential access and recreation issues associated with proposed rail and improvements:

- The improvement or establishment of alternative transportation modes shall be designed to assure protection of sensitive resources and the retention of the small-town scenic qualities of Del Mar.

In regards to recreational opportunities, the City of Del Mar's LCP has established policies that would facilitate a system of public parks and recreational facilities to support the year-round needs of both residents and visitors to the area and encompass a full range of activities for people of all ages, physical conditions, and socio-economic situations. These policies are as follows:

- The City shall implement a comprehensive program to preserve existing open space and recreation lands and where feasible acquire additional lands to meet the long-range needs of residents and visitors. This program shall be developed using the following criteria:
  - Small "pocket parks," also known as "mini-parks," should be utilized in the largely developed areas of the City where land for larger parks is difficult to obtain.
  - Park planning should be integrated with planning for open space, conservation, hiking, bicycle, and equestrian trails, regional parks, and scenic highways. Whenever practical, parks should be linked together by a system of trails and/or open space.
- The City shall cooperate with other jurisdictions in the acquisition and preservation of open space and recreation lands through the following:
  - Encourage the expansion of nearby State and County parks, including continued cooperation with other local, State, and Federal agencies to implement the San Dieguito Lagoon Resource Enhancement Program.
  - Cooperate in the planning and implementation of the San Dieguito River Valley Regional Open Space Park and ensure that said park plan or that for any other park along the San Dieguito River would avoid impacts to resources

Proposed TREP/PWP improvements would provide for enhanced alternative transportation modes, particularly relating to rail where a new platform would support access to Del Mar Fairgrounds and Racetrack and nearby coastal areas. In addition, rail improvements would facilitate increased and efficient alternative transportation, providing for a reduction in private vehicle use to and from Del Mar's coastal areas. The proposed TREP/PWP includes pedestrian improvements across I-5 that would also facilitate non-automobile access to the Del Mar Fairgrounds and Racetrack and local beach areas. In addition, tunnel options for rail alignments through Del Mar provide an opportunity to remove existing rail facilities from the Del Mar bluffs, the San Dieguito River Valley, and Los Peñasquitos Lagoon, which could ultimately restore these areas as open space and/or passive recreational use areas.

The public access and recreational resource protection policies of the City of Del Mar LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore these policies would not need to be amended to implement the proposed transportation improvements. The proposed TREP/PWP is consistent with all relevant City of Del Mar LCP public access and recreation policies; no LCP policy amendments are required.

City of Encinitas

The City of Encinitas references Sections 30211, 30212, 30212.5, 30214, 30220, 30223, 30231, 30240, 30252 of the Coastal Act into its LCP, and contains various program-wide policies to provide public access and circulation to the shoreline, to maintain and preserve open space areas, and to provide open spaces for recreational use.

The City has implemented the following LCP policies to facilitate public access and circulation to the shoreline:

- The City will encourage continued public vertical access by:
  - Cooperating with the State in planning for the Cardiff and San Elijo State Beach areas and the South Carlsbad State Beach area to increase the external accessibility and usability of these beaches, as well as enhancing their visitor-serving potential; and
- The City will support increased public transportation service to shoreline recreational areas designated for increased visitation, including the following:

  - Support existing and increased levels of service where needed by the North County Transit District;
  - Support low-cost transfers between all transit operators in the Coastal Zone;
  - Encourage the provision of transit stops and crosswalks at all major beaches; and
  - When bus transportation to beaches is deemed feasible, inset bus bays at major beach transit stops shall be considered to provide for passenger embarkation/debarkation.
- Establish a balance of natural open space and "improved" recreational open space and implement measures to preserve, and maintain the natural environment.
- Leave appropriate areas of neighborhood and community parks in a natural state, retaining natural topography and vegetation where preservation is feasible.
- Provide for early acquisition of park sites to ensure proper location, adequate size, and lower costs through development of a program that identifies future park needs and possible future sites.

As the City strives to have coastal areas continue to play a dominant role in providing residents with open spaces for recreation, the LCP also contains the following policies:

- The City shall continue to support the acquisition and improvement through outright purchase, private donations, establishment of tax benefits, living trusts, etc., of additional local park sites.
- The City recognizes Cardiff Beach State Park, San Elijo Beach State Park, South Carlsbad Beach State Park and Moonlight Beach (future City) State Park, as the major visitor destination beaches in the Encinitas area. The City will work with the State to upgrade and promote access to these State beaches, and will act to upgrade and promote access to Moonlight Beach, in order that they may receive an increased proportion of visitor uses.

The proposed TREP/PWP would create and enhance features for an efficient and integrated transportation program by increasing rail, carpooling, and public transit capacity within the city and corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. The proposed TREP/PWP also includes a number of recreational trail improvements intended to facilitate and compliment the city's trail system. The TREP/PWP would improve pedestrian access to the San Elijo Lagoon area via a pedestrian crossing and trail. In addition, the proposed community enhancement features would greatly increase connectivity between neighborhoods east and west of I-5. The project would include public recreational amenities such as trails to facilitate public access from inland to coastal areas of the City. The project would also facilitate access to coastal areas for recreation via an improved transit system for multiple transportation modes.

TREP/PWP improvements would include a number of reconfigured interchanges, overpasses, and underpasses (all of which would be constructed with pedestrian and bicycle facilities, and some located in floodplain areas and public ROWs) that would greatly enhance pedestrian and bicycle circulation opportunities to the coast. Bicycle and pedestrian facilities and routes would also connect with public transit centers, link neighborhoods, and connect inland and coastal areas.

TREP/PWP improvements would also connect Cottonwood Creek Park to Union Street and would construct a bridge to provide pedestrian access across I-5. A new pocket park would be located at the western end of the pedestrian bridge on a vacant parcel owned by the City of Encinitas. The proposed pedestrian bridge and trail improvements at Manchester Avenue would include adding new trail and associated sidewalk improvements under the I-5 bridge structure across San Elijo Lagoon with paving and guardrails to improve the trail adjacent to the south bridge abutment with connecting trails; constructing a pedestrian walkway structure across San Elijo Lagoon; and, improving the streetscape

on Manchester and a sidewalk on the south side. The new trail and associated sidewalk improvements would connect existing trail segments that are currently separated by the lagoon and highway.

TREP/PWP improvements would include sidewalks and trails connecting the Hall Property Park with the east side of the highway across MacKinnon Bridge and south along Villa Cardiff Drive, and would improve Birmingham Drive and Villa Cardiff Drive with an enhanced park and ride facility, new trees, and a pedestrian connection to the north. The proposed trail connecting Hall Property Park to Santa Fe Drive would provide more direct and attractive access to the park from neighborhoods east of I-5.

In addition, a new trail would connect Santa Fe Drive on the south and Requeza Street on the north and include improved drainage and wetland vegetation restoration. The improvements would provide pedestrians and bicyclists direct access from Santa Fe Drive to Requeza Street, and would create a connection to the trail improvements of the Hall Property Park Trail. A new trail along the east side of I-5 would also connect Requeza Street with Encinitas Boulevard, thereby improving public access to local beach areas.

Additional benefits to public access would result from development of the proposed transit center at Manchester Avenue. The transit center would include a new direct access ramp onto I-5, parking for 400 cars, and a bus platform, all of which would facilitate ride-sharing and multi-modal transit options through direct access to the uncongested HOV/managed lanes where reduced travel times and reliability for residents, commuters, and recreationists are assured.

The public access and recreational resource protection policies of the City of Encinitas LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore these policies would not need to be amended to implement the proposed transportation facility improvements. The proposed TREP/PWP is consistent with all relevant City of Encinitas LCP public access and recreation policies; no LCP policy amendments are required.

City of Carlsbad

In regards to recreation and visitor-serving facilities within the Mello I land use segment, the City's LCP states: "Several Coastal Act policies require consideration of visitor-serving uses." The Mello Bill highlighted public recreation as one of the Chapter 3 policies to be specifically addressed in this LCP. Other applicable policies of the Act include Sections 30212.5, 30213, 30222, 30223 and 302500(c). Of particular interest is 30222 which states:

> The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

Land use policies for the Mello II land use segment under the City of Carlsbad LCP that address recreation and visitor-serving uses (including city and regional parks, as well as shoreline access issues) are listed below.

- Additional City parks will be required in conjunction with new development. These parks should be a minimum of five acres in order to accommodate a wide variety of both active and passive uses. Locations of additional City parks are Altimira Park (12 acres) and North La Costa Park (five acres); both are listed as proposed parks in the Parks and Recreation Element of Carlsbad's General Plan.
- An access trail shall be provided along the southern shoreline of Buena Vista Lagoon to facilitate public awareness of the natural habitat resources of the lagoon. To protect the sensitive resources of this area, access development shall be limited and designed in consultation with the State

Department of Fish and Game. In permitted development of properties adjacent to the lagoon, offers of dedication of lateral accessways, irrevocable for a term of 21 years, shall be required to be provided to the City of Carlsbad, State Coastal Conservancy, or other appropriate public agencies. Such access dedications shall be of at least 25 feet in width upland from environmentally sensitive areas and any required buffers thereto. In addition, the City of Carlsbad, State Coastal Conservancy, and Wildlife Conservation Board shall seek to obtain lateral accessways across developed lands.

Public Access Land Use Policies for the West Batiquitos Lagoon/Sammis Properties land use segment under the City of Carlsbad LCP, state that:

> A pedestrian walkway shall be provided along the western portion of areas G and H from approximately Avenida Encinas on the north to the San Marcos Creek Bridge on the south. The walkway shall be permanently open to use by the public.
>
> Lagoon accessways, blufftop accessways or equivalent overlook areas, and a bike path/pedestrian walkway, shall be provided if agricultural land on the north shore of Batiquitos Lagoon is developed.

Public Access Land Use Policies for the East Batiquitos Lagoon/Hunt Properties land use segment under the City of Carlsbad LCP, state that:

> La Costa Avenue is designated a major arterial providing coastal access from inland areas to the east.
>
> A public access trail system along the north shore of Batiquitos Lagoon with adequate trailhead public parking areas shall be required as a condition of approval for any development along the north shore pursuant to the Pacific Rim Master Plan.
>
> Public access along the south shore shall be provided as part of La Costa Avenue improvements. Access shall include but not be limited to a pedestrian walkway and bicycle lane along the entire south shore length covered by this LCP segment.
>
> Lagoon accessways and overlook areas along the north shore shall be provided.

The proposed TREP/PWP improvements would include a number of recreational trail, bike, and pedestrian improvements intended to facilitate public access and recreation in Carlsbad. TREP/PWP improvements would also include a number of reconfigured interchanges, overpasses, and underpasses (some located in floodplain areas and public ROWs) that would greatly enhance pedestrian and bicycle circulation opportunities to the coast. Bicycle and pedestrian facilities and routes would also connect with public transit centers, link neighborhoods, and connect inland and coastal areas.

Improvements would include a trail on east side of I-5 at Batiquitos Lagoon that would link the new nature center on the south side of the lagoon to the trails on the north side of the lagoon and the west side of I-5. Proposed trails on the west and east side of I-5 at Agua Hedionda Lagoon would improve access to the lagoon by providing a pedestrian bridge that would connect to the Rail Trail system currently being developed by the City, and would also include a trail crossing from east to west following the southern shore of the lagoon.

Streetscape enhancements on Chestnut Avenue would improve existing pedestrian facilities, including widened sidewalks with street trees and planting buffers, safety lighting for the underpass, and

potential incorporation of public art; moreover, the project includes access trail improvements for the Buena Vista Lagoon area that would be located and designed to minimize potential impacts to ESHA. The Park and Ride Enhancement/Nature Center at La Costa Avenue would provide nature center, lagoon overlooks, interpretive displays and additional parking to the existing park and ride at La Costa Avenue on the east side of I-5, developed in concert with the Batiquitos Lagoon Foundation.

TREP/PWP improvements would not affect the City's ability to establish a new regional park, and could help facilitate the City's park policies as the project includes measures such that parcels (in whole or in part) that are purchased for freeway widening but not required for use as permanent state ROW would be considered as potential opportunities for community pocket parks or public open space at the request of the City, and would relinquished to the City to maintain in perpetuity.

The public access and recreational resource protection policies of the City of Carlsbad LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore these policies would not need to be amended to implement the proposed transportation facility improvements. The proposed TREP/PWP is consistent with all relevant City of Carlsbad LCP public access and recreation policies; no LCP policy amendments are required.

City of Oceanside

The City of Oceanside LCP includes the following policies, applicable to the proposed TREP/PWP, to ensure that adequate access to and along the coast would be provided and maintained.

- Existing and new public accessways shall not be closed or converted to other uses without approval from the California Coastal Commission.
- The City, in conjunction with the State Department of Fish and Game, shall continue its efforts to provide and maintain an adequate buffer zone between Buena Vista Lagoon and development along its shore…Within the buffer zone only passive recreation uses (such as walking, nature study, photography, small resource interpretive facilities and viewing areas) shall be allowed with no structures other than permitted by this policy and only very minor alteration of natural land forms or conditions for uses permitted by this policy.
- The bike path along Highway 76 shall be extended under I-5 and the railroad track to the river mouth on the south side of the San Luis Rey River if and when funds are available to do so.

The City of Oceanside LCP also includes policies to provide and maintain a wide range of public recreation areas, beach support facilities, and visitor-serving facilities, commensurate with need. Policies that are applicable to the proposed TREP/PWP include:

- The City shall continue to promote coastal tourism through the revitalization of the coastal area and upgrading of visitor amenities.
- Since Oceanside beaches serve a recreational function for primarily non-local persons, the City shall seek funding assistance from State or County agencies for acquisition and construction of new parking facilities.

The City of Oceanside LCP includes policies to maximize public access in the San Luis Rey River and environs consistent with natural resources values. In addition, low-cost recreation and visitor-serving facilities would be a priority land use in the river area under the City's LCP, commensurate with public demand for such facilities:

- If and when funds become available, establish a viewing area with interpretive signs on the south side of Capistrano Drive, across from Capistrano Park.

- Where appropriate, require developers to participate in construction of an on- and off-site site bicycle and pedestrian facility improvements:
- Require developers to participate in the construction of on- and off-site bicycle and pedestrian facility improvements in the San Luis Rey River area. (LUP SLR River policy #1d).
- Support the inclusion of a bicycle/pedestrian trail system in conjunction with the development of the Route 76 bypass project. (LUP SLR River policy #1e).

The proposed TREP/PWP includes a number of recreational trail, bicycle, and pedestrian improvements intended to facilitate public access and recreation in Oceanside. TREP/PWP improvements would also include a number of reconfigured interchanges, overpasses, and underpasses (some located in floodplain areas and public ROWs) that would greatly enhance pedestrian and bicycle circulation opportunities to the coast. Bicycle and pedestrian facilities and routes would also connect with public transit centers, link neighborhoods, and connect inland and coastal areas. The TREP/PWP does not include improvements that would result in closure or conversion of public accessways, but would enhance pedestrian circulation and bicycle opportunities to the coast.

The TREP/PWP includes public recreational amenities such as trails that would facilitate public access from inland to coastal areas of the City, and which would be located and designed to protect aesthetic and resource values. Proposed improvements would include a parking/staging area for recreation at SR-76 (consisting of a new parking area, trailhead staging area and other support amenities) to support improved physical access to the existing San Luis Rey Class I bike path. In addition, improvements would include a shared-use park/community, open-space park for the city and the Family Recovery Center, which could include meandering paths, water features, detailed native plantings, and public artwork.

The TREP/PWP improvements would enhance pedestrian overpass connections on Mission Avenue and Bush Street. The Mission Avenue overpass improvements would provide wider and more direct pedestrian routes as well as realignment of the highway on- and off-ramps to allow for signalized pedestrian crossings, and would improve existing pedestrian connections on a popular pedestrian route. The enhanced pedestrian overpass improvements on Bush Street would connect existing community gardens at Civic Center Drive and Witzel Street with new and widened sidewalks, community garden plots, a paved trail from the east side of the bridge along the on-ramp to Buena Street, and new and improved lighting and landscaping. Further, improvements would provide enhancements to the Division Street Overpass, which would include widening of the existing pedestrian overpass (enhanced with special paving and landscaping), and new sidewalks and street trees that would enhance Brooks Street going north. In addition, improvements to the pedestrian underpass at the San Luis Rey River would include a widened sidewalk, ADA-compliant ramp connections, improved lighting and planting, and public artwork. The California Street Overpass would also be enhanced with the addition of a pocket park at Moreno Way and I-5, new landscaping, and widened sidewalks.

Pedestrian streetscape enhancement is also proposed at Oceanside Boulevard, which would include sidewalk and landscape improvements under and adjacent to the I-5 overpass, improved fences along the SPRINTER tracks, and enhanced plantings, lighting, and public artwork. A regional gateway feature would be provided at Harbor Drive to reflect regional identity as an entry to Oceanside and the County.

The public access and recreational resource protection policies of the City of Oceanside LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore these policies would not need to be amended to implement the proposed transportation facility improvements. The proposed TREP/PWP is consistent with all relevant City of Oceanside LCP public access and recreation policies; no LCP policy amendments are required.

5.4 MARINE RESOURCES: WATER QUALITY AND WETLANDS

5.4.1 Coastal Waters and Wetlands in the Corridor

The NCC is located in a region that contains some of the most significant remaining coastal lagoons in California. The corridor's lagoons, coastal and inland waterbodies, and smaller watershed drainages support a variety of marine resources including open water, wetland, and riparian habitats. Figure 5.4-1 illustrates the hydrologic units of the corridor, and Figure 5.4-2A through Figure 5.4-2G provide an overview of existing and potential open water, wetland, and riparian habitat areas in the corridor based on the corridor setting evaluated and documented for purposes of preparing the TREP/PWP. As the corridor's natural resources are subject to change throughout implementation of the TREP/PWP, the marine resource mapping included in Figure 5.4-A through Figure 5.4-G provide the baseline from which to evaluate potential project impacts to known and potential wetland resources, and to determine when the provisions of this section apply to future project implementation pursuant to the Notice of Impending Development (NOID) procedures enumerated in Chapter 6.

5.4.1.1 Water Quality

The NCC area parallels the coastline throughout northern San Diego County and lies entirely within the coastal region of the San Diego Basin. As discussed in Chapter 2, the corridor improvement areas cross the following 4 of 11 hydrologic units (HUs) within the San Diego Regional Water Quality Control Board (RWQCB) Basin: San Luis Rey River, and the Carlsbad, San Dieguito and Peñasquitos HUs. These HUs contain the corridor's coastal lagoons, the San Luis Rey River, and many other coastal streams, drainages, and wetland resources. Each HU has been developed to varying degrees and all are expected to experience between 7% and 14% more development by 2015.

While the corridor and entire San Diego coastal region has experienced rapid development over the last several decades, the corridor contains significant hydrologic features with many beneficial uses for San Diego residents, visitors, and natural resources. Surface hydrology within the corridor is influenced primarily by the coastal lagoons, creeks, and San Luis Rey River. The corridor contains six significant coastal lagoon systems including Los Peñasquitos, San Dieguito, San Elijo, Batiquitos, Agua Hedionda, and Buena Vista. In addition, the corridor includes the following significant coastal and inland waterways: Carroll Canyon Creek/Soledad Canyon Creek, Los Peñasquitos Creek, Carmel Valley Creek, Cottonwood Creek/Moonlight Creek, San Marcos and Encinitas Creeks, Encinas Creek, Loma Alta Creek/Slough, and the San Luis Rey River. Figure 5.4-2A through Figure 5.4-2G illustrate the significant surface hydrologic features within the corridor including the lagoons, rivers, streams/creeks and other drainages.

The California Coastal Basin Aquifer is the primary aquifer identified in the corridor. Shallow groundwater likely occurs adjacent to, or in the vicinity of, streams, rivers, and lagoons within the corridor and in the coastal bluff areas of Del Mar. Groundwater is also likely to saturate surface and formational materials near alluvial or estuarine environments, such as the mouths of the major drainage areas and lagoons.

Beneficial Uses

The San Diego RWQCB Basin Plan (Basin Plan) defines "Beneficial Uses" for water bodies as those necessary for the survival or well-being of people, plants, and wildlife. Table 5.4-1 and Table 5.4-2 provide information relative to beneficial uses for the corridor's coastal and inland surface waters.

Beneficial uses for the lagoons in the corridor generally include contact and noncontact recreation; preservation of biological habitats of special significance, estuarine habitat (potential estuarine habitat for Buena Vista Lagoon), marine habitat, wildlife habitat, rare, threatened and endangered species; and fish migration and spawning, reproduction, and/or early development (with the exception of Buena Vista Lagoon, which is the only lagoon with the beneficial use of warm freshwater habitat). Beneficial uses for Los Peñasquitos and Agua Hedionda Lagoon include shellfish harvesting, with additional beneficial uses assigned to Agua Hedionda for industrial services supply, commercial and sport fishing, and aquaculture. Loma Alta Slough is designated for contact and noncontact recreation, estuarine, marine and wildlife habitat, and rare, threatened and endangered species. The mouth of San Luis Rey River is also designated for contact and noncontact recreation, marine and wildlife habitat, and rare, threatened and endangered species, as well as for fish migration.

All of the inland waterways provide beneficial uses or have the potential to provide beneficial uses. These uses include agricultural supply, industrial services supply, contact and noncontact recreation, warm freshwater habitat and wildlife habitat. Exceptions are Encinitas and Loma Alta Creeks, which are not designated for agricultural supply or industrial services supply. Additional beneficial uses include spawning, reproduction, and/or early development for San Dieguito River, and cold freshwater habitat for Soledad and Corral Canyon Creeks and San Dieguito River. Los Penasquitos Creek is designated for preservation of biological habitats of special significance, and beneficial use for rare, threatened, and endangered species is also assigned to Carroll Canyon Creek and San Luis Rey River. Beneficial use for hydropower generation is assigned to San Luis Rey River, and beneficial uses for groundwater resources associated with Loma Alta Creek and Encinas Creek include municipal and domestic supply (for both creeks) and industrial services (Encinas Creek only).

5.4.1.2 Corridor Lagoons

Beneficial Uses

Corridor lagoons provide significant benefits in their respective watersheds for flood relief (by allowing high flows to slow and disperse into the larger water bodies) and for water quality (where sediment loads, nutrients, and toxins from stormwater are discharged and absorbed by vegetation within the lagoon prior to entering the ocean). As discussed in Chapter 2 (Section 2.2.6.2), the lagoons also contain sensitive habitat areas for threatened and endangered species and migratory birds, as well as for fish and many different wildlife species. In addition, where associated with open space and adjacent habitat preservation areas, the corridor lagoons provide habitat linkages and wildlife corridors in a coastal area that has experienced rapid population growth and urbanization over the last several decades. The corridor lagoons provide exceptional public recreation amenities with trail systems, interpretative areas, wildlife observation opportunities, and, in some cases, expansive beach areas where the lagoons meet the ocean.

Restoration Efforts

Ongoing lagoon resource planning and management has been implemented at varying levels for the corridor's lagoons and will continue to be essential in ensuring that the many flood, water quality, habitat, and recreation benefits of these significant watershed features are maintained and enhanced. Los Peñasquitos Lagoon, San Dieguito Lagoon, Batiquitos Lagoon, and Agua Hedionda Lagoon have been the subjects of restoration efforts that have included, among other things, inlet maintenance to allow for tidal circulation, maintenance dredging, water quality monitoring, and wetland and upland habitat restoration. While a number of stakeholder groups are coordinating restoration planning efforts for San Elijo Lagoon and Buena Vista Lagoon (discussed in more detail in Section 5.4.3), these lagoons have yet to undergo comprehensive restoration programs. Irrespective of current restoration

TABLE 5.4-1: BENEFICIAL USES (COASTAL SURFACE WATERS)

Water Body Name	Industrial Services	Contact Recreation	Non-Contact Recreation	Commercial/ Sport Fishing	Biological Habitats of Special Significance	Estuarine Habitat	Wildlife Habitat	Rare, Threatened Endangered Species	Marine Habitat	Aquaculture	Migration	Spawning, Reproduction and/or Early Development	Warm Freshwater Habitat	Shellfish Harvesting
Los Peñasquitos Lagoon		+	+		+	+	+	+	+		+	+		+
San Dieguito Lagoon		+	+		+	+	+	+	+		+	+		
Batiquitos Lagoon		+	+		+	+	+	+	+		+	+		
San Elijo Lagoon		+	+		+	+	+	+	+		+	+		
Agua Hedionda Lagoon	+	+	+	+	+	+	+	+	+	+	+	+		+
Buena Vista Lagoon		+	+		+	x	+	+	+				+	
Loma Alta Slough		+	+			+	+	+	+					
Mouth of San Luis Rey River		+	+				+	+	+		+			

Source: I-5 NCC Project Draft EIR/EIS (Section 3-10), June 2010.

+ Existing Beneficial Use
* Excepted from Municipal
x Potential Beneficial Use

TABLE 5.4-2: BENEFICIAL USES (INLAND SURFACE WATERS)

Water Body Name	Municipal/ Domestic	Agriculture	Industrial Service	Hydropower Generation	Contact Recreation	Non-Contact Recreation	Biological Habitats of Special Significance	Warm Freshwater Habitat	Cold Freshwater Habitat	Wildlife Habitat	Rare Threatened Endangered Species	Spawning, Reproduction and/or Early Development
Carmel Valley	*	+	+		x	+		+		+		
Soledad Canyon Creek	*	+	+		x	+		+	+	+		
Carroll Canyon	*	+	+		x	+		+	+	+	+	
Los Peñasquitos Creek	*	+	+		x	+	+	+		+		
San Dieguito River	*	x	x		+	+		+	+	+		+
Canyon del Las Encinitas	*				x	+		+		+		
Loma Alta Creek	*				x	+		+		+		
San Luis Rey River	*	+	+	+	+			+		+	+	

Source: I-5 NCC Project Draft EIR/EIS (Section 3-10), June 2010.

+ Existing Beneficial Use
* Excepted from Municipal
x Potential Beneficial Use

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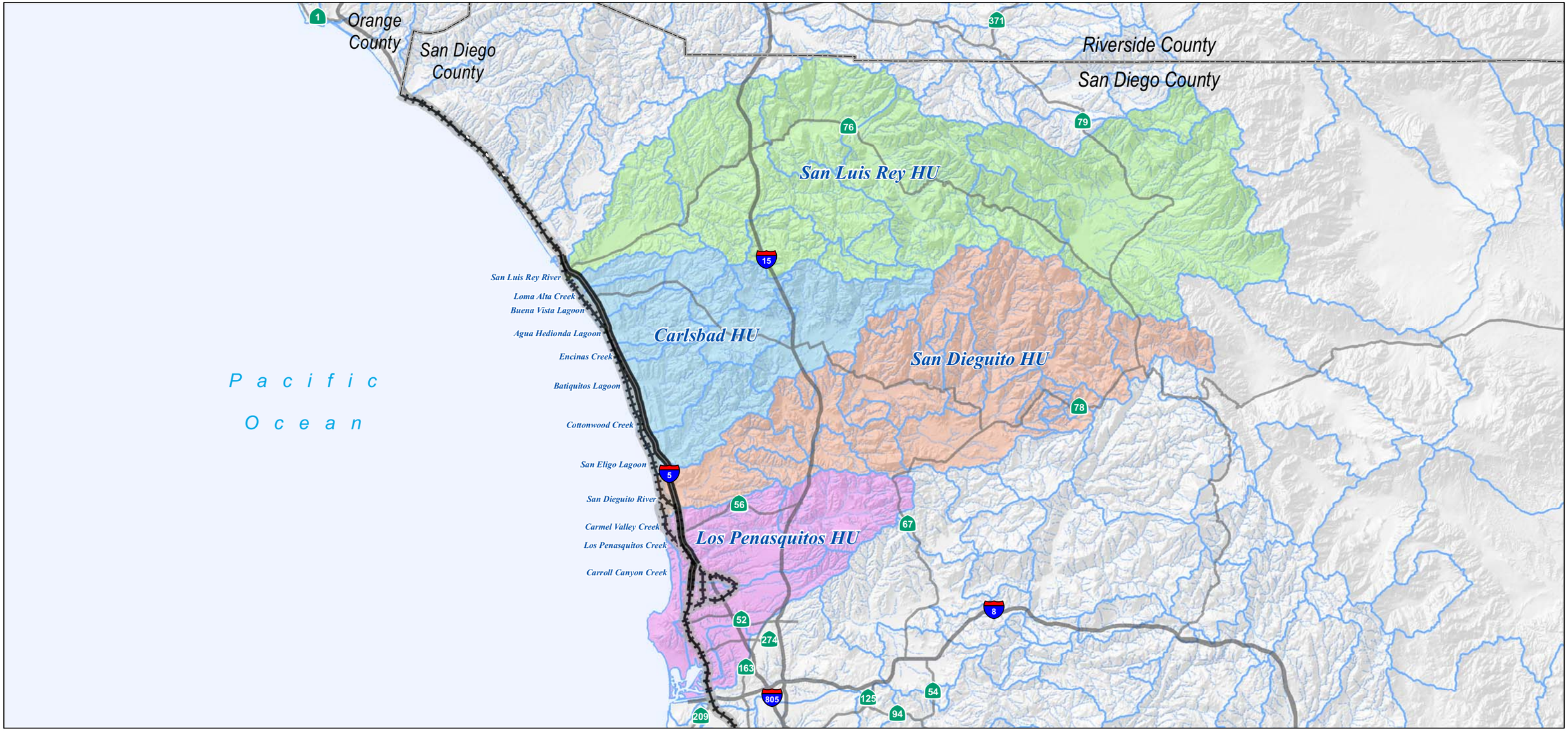

NORTH

0 2.5 5 10 Miles

County Line
Interstate
State Route
I-5 Project Area
LOSSAN Project Area

Hydrologic Unit
- Carlsbad
- Los Penasquitos
- San Dieguito
- San Luis Rey
- Hydrologic Sub-Area

DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, USGS NHD 2010.

FIGURE 5.4-1

San Diego Regional Water Quality Control Board Basin Hydrological Units

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

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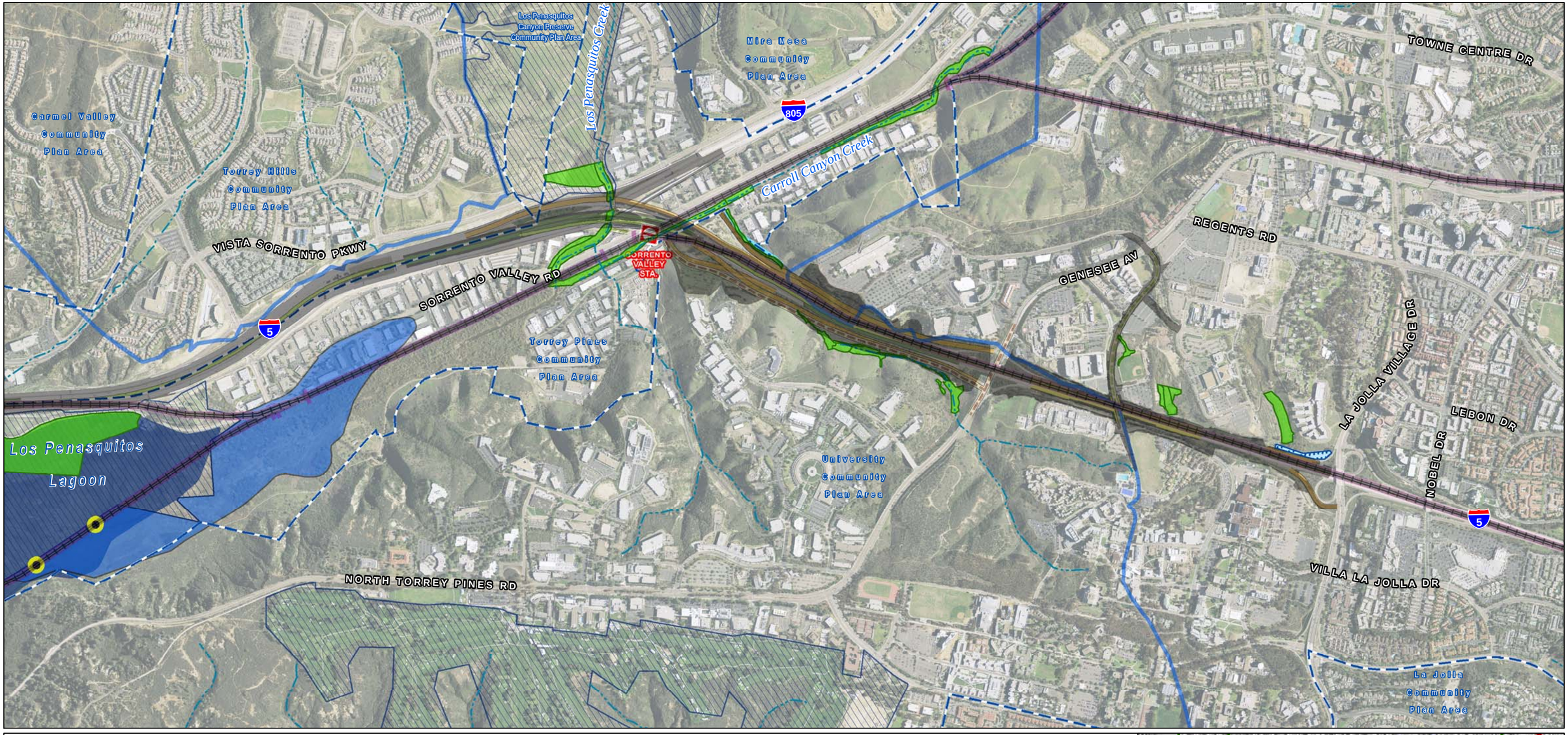


NORTH

Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

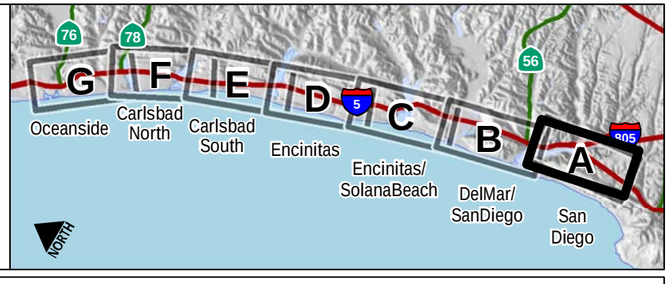
- I-5 Project Area
- LOSSAN Project Area
- Station
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin



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

FIGURE 5.4-2A

Marine Resources Map (City of San Diego)

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

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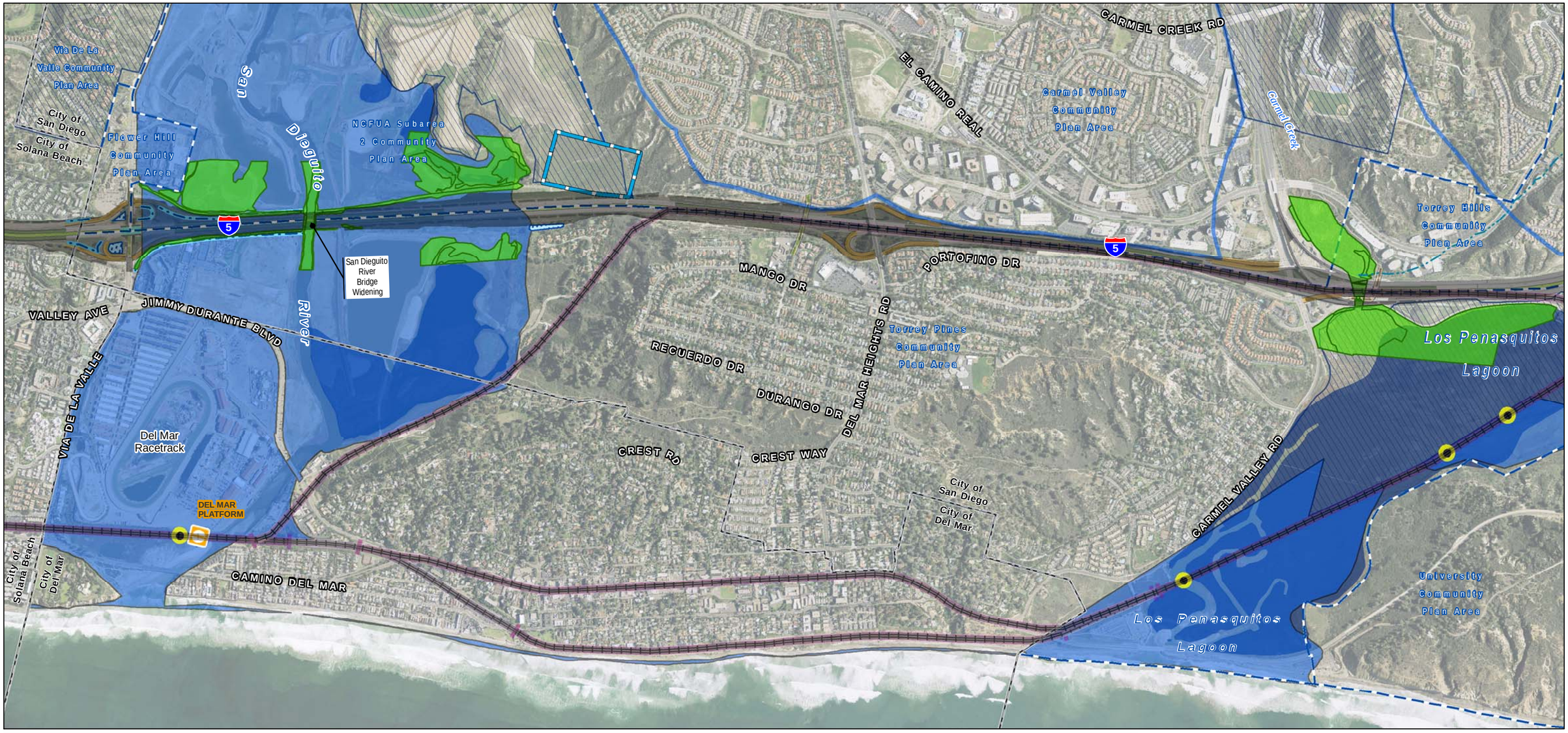

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Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

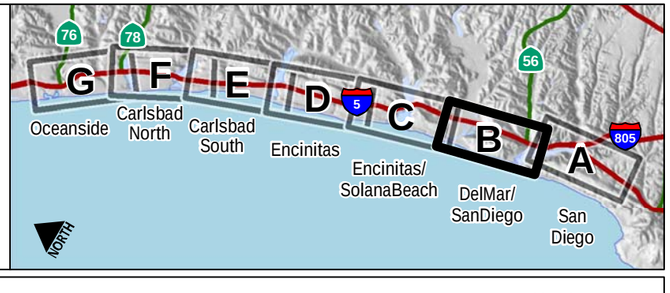
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Proposed Platform
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin
- Resource Mitigation Site



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

FIGURE 5.4-2B

Marine Resources Map (City of Del Mar / San Diego)

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

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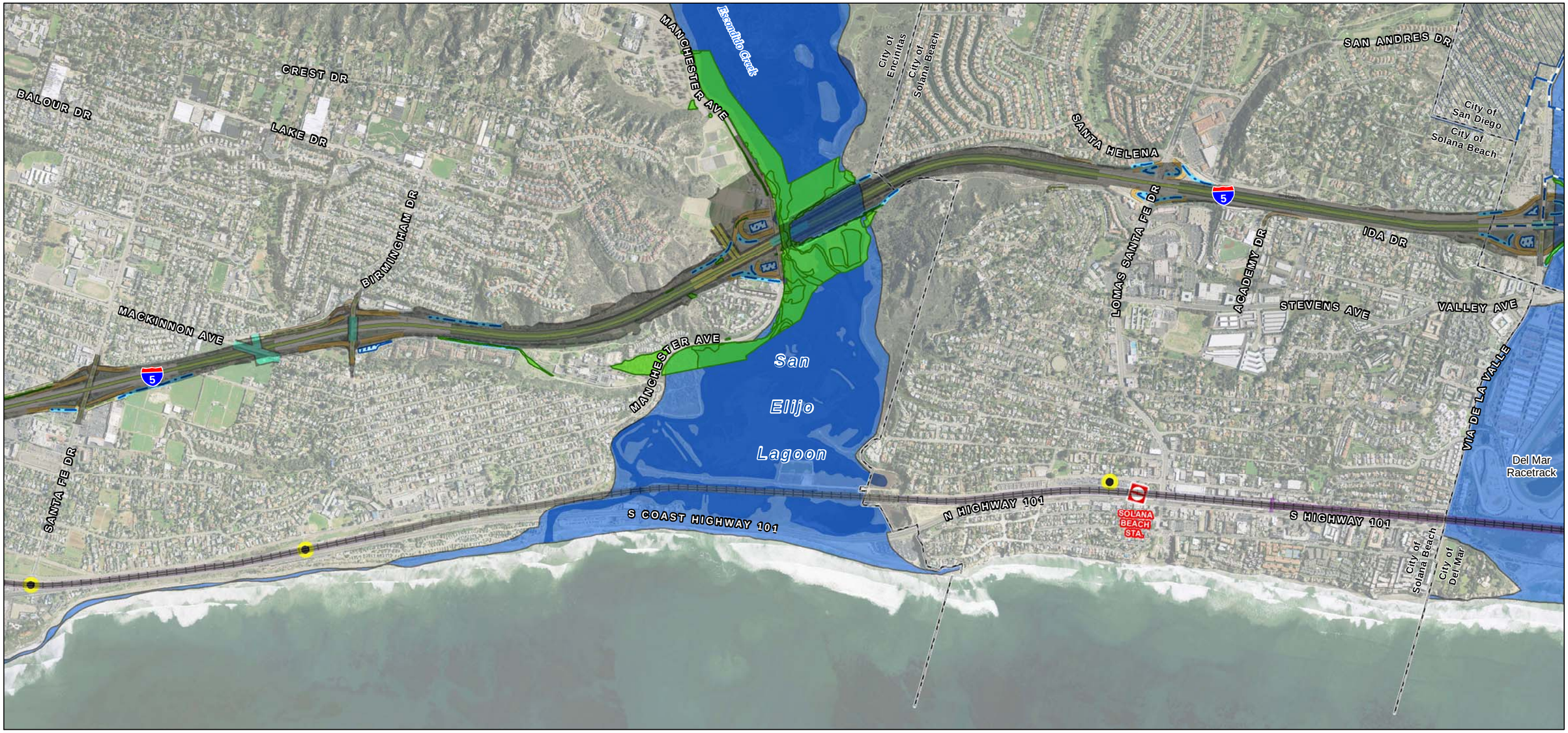


NORTH

Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

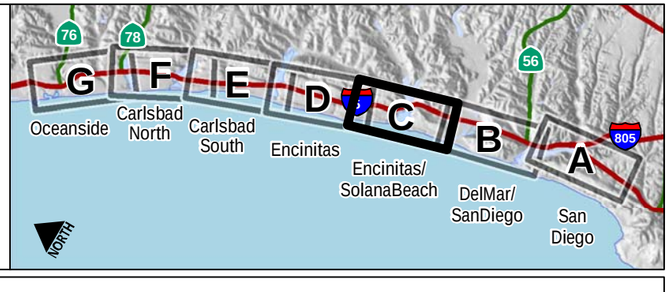
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin



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

FIGURE 5.4-2C

Marine Resources Map (City of Encinitas / Solana Beach)

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

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Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

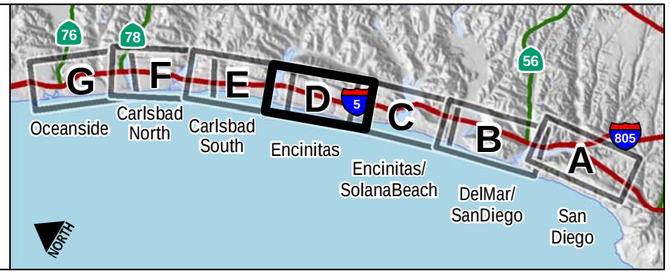
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin



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

FIGURE 5.4-2D

Marine Resources Map (City of Encinitas)

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

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Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

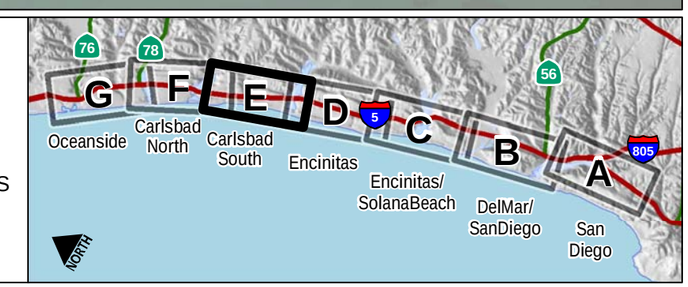
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin



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

FIGURE 5.4-2E

Marine Resources Map (City of Carlsbad [South])

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

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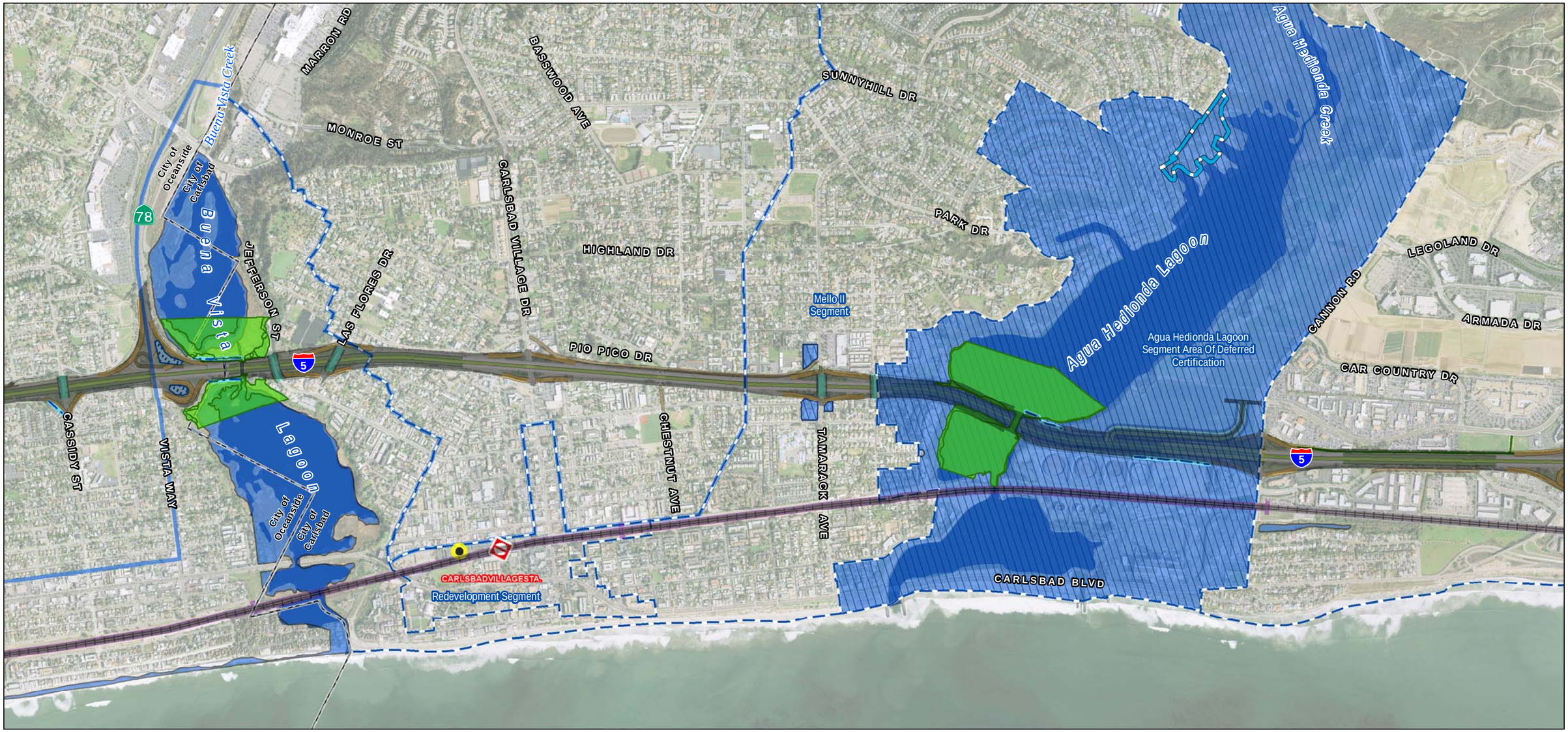

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Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

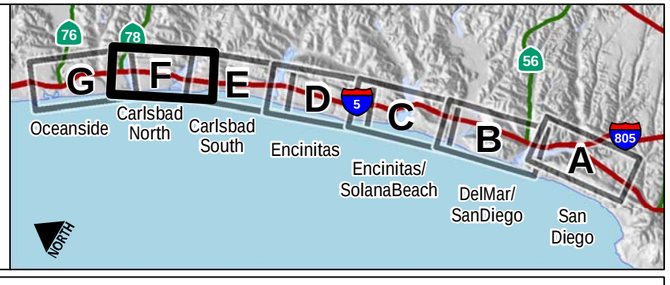
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin
- Resource Mitigation Site



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

FIGURE 5.4-2F

Marine Resources Map (City of Carlsbad [North])

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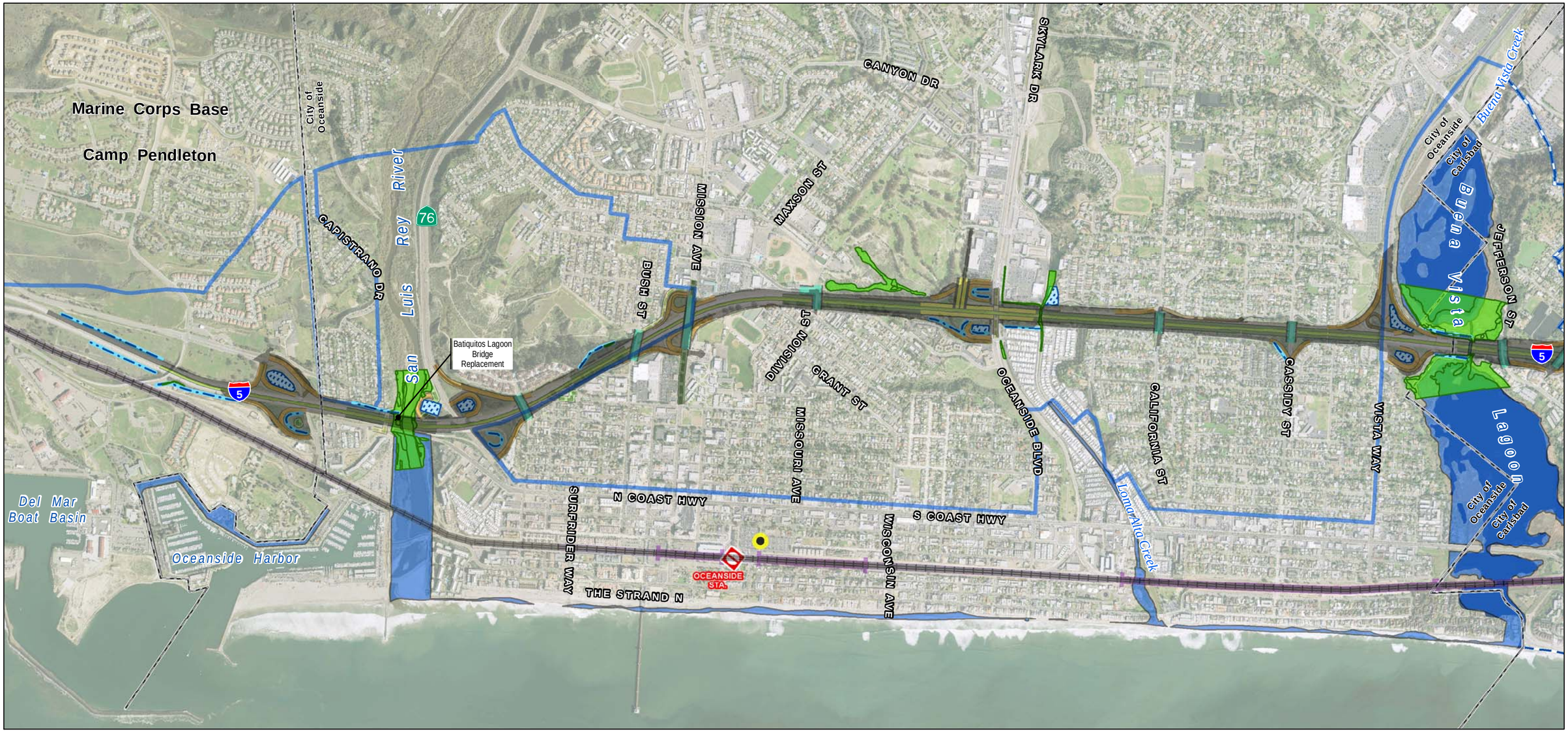


NORTH

Note: TREP/PWP marine resource maps provide an overview of existing and potential marine resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of marine resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for marine resources. Where TREP/PWP-authorized projects have the potential to impact marine resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID procedures, as applicable.

0 500 1,000 2,000 Feet

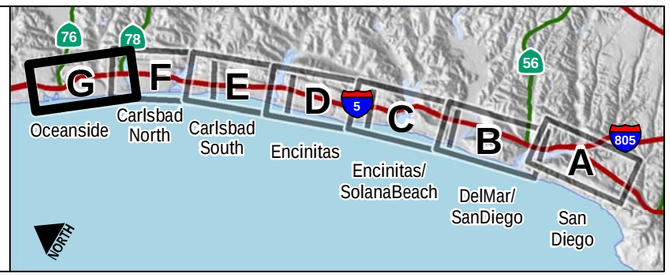
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Overcrossing Improvements

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Coastal Zone Boundary

Marine Resources

- Stream/River
- Bioswale
- Wetland Areas/Waters of the US
- Proposed Detention Basin



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

FIGURE 5.4-2G

Marine Resources Map (City of Oceanside)

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efforts, all of the corridor lagoons require ongoing management to address the effects of increased year-round freshwater input, accelerated sedimentation and water contamination, reduced tidal mixing, introduction of exotic species, revegetation of disturbed areas, and impacts on habitats and wildlife from adjacent development and recreational use.

Chapter 2 (Section 2.2.6.2) provides a description of each of the corridor lagoons and details the lagoons' ownership, general size, and associated watershed features, habitats, and past and pending planning and restoration efforts. Table 5.4-3 provides a summary of this information in addition to information regarding the status of long-term management, land uses, the surrounding transportation system, and various factors affecting lagoon system health.

5.4.1.3 Other Corridor Wetlands and Riparian Habitats

Wetland and riparian habitat areas are also found in a number of other coastal and inland waterways within the corridor's watersheds including Carroll Canyon Creek (Soledad Canyon Creek), Los Peñasquitos Creek, Carmel Valley Creek, Cottonwood Creek/Moonlight Creek, Encinas Creek, Loma Alta Creek/Slough, and the San Luis Rey River.

Carroll Canyon Creek (Soledad Canyon Creek), Los Peñasquitos Creek, and Carmel Valley Creek all drain the Los Peñasquitos watershed and ultimately discharge into the Pacific Ocean via Los Peñasquitos Lagoon. Carroll Canyon Creek originates southeast of the Miramar Reservoir, in the City of San Diego neighborhood of Scripps Miramar Ranch and feeds into Soledad Canyon Creek. Soledad Canyon Creek has been channelized through Sorrento Valley in a concrete-lined channel for approximately 0.5 miles and converges with Los Peñasquitos Creek, which flows in a natural channel until it reaches Los Peñasquitos Lagoon. Carmel Valley Creek is located in San Diego just south of Carmel Valley Road and currently drains through a concrete box culvert under Sorrento Valley Road. These creeks include wetland and riparian areas, and provide flood relief and water quality benefits.

Cottonwood Creek and Moonlight Creek flow through an urbanized section of Encinitas. Cottonwood Creek is a small creek that flows intermittently above- and belowground through Encinitas between San Elijo and Batiquitos Lagoons. Cottonwood Creek is primarily channelized or underground near I-5; however, several drainages feed into Cottonwood Creek from the east to west side of I-5 where the outlet to the Pacific Ocean has recently been restored. Restoration efforts have also included the creation of Cottonwood Creek Park west of I-5 where the creek channel has been restored to an aboveground channel between I-5 and the ocean. Cottonwood Creek does not provide substantial flood relief, water quality improvement, or wildlife habitat until reaching the newly restored channels in Cottonwood Creek Park. Moonlight Creek is a small tributary in Cottonwood Creek Park that runs parallel to and west of I-5. Moonlight Creek primarily conveys urban runoff from both sides of I-5 into Cottonwood Creek and supports some freshwater marsh habitat and southern willow scrub, providing habitat to riparian bird species and limited water quality and flood relief benefits.

San Marcos and Encinitas Creeks are primary tributaries to Batiquitos Lagoon, both of which discharge at the southeastern corner of the lagoon. San Marcos Creek originates on the western slopes of the Merriam Mountains in west central San Diego County and discharges into the Pacific Ocean via Batiquitos Lagoon. Encinitas Creek originates in the hills southwest of Questhaven Road and parallels El Camino Real before it discharges to Batiquitos Lagoon under La Costa Avenue.

The Encinas Creek watershed includes the creek itself and a long earthen drainage parallel to I-5 that is fed mostly by urban and freeway runoff, which then flows into the creek through a concrete channel. Encinas Creek contains many invasive plant species and has been channelized along some of its length. The drainage paralleling I-5 supports cattails, amphibians, and bird species. Encinas Creek

provides some wildlife habitat and water quality and flood relief; however, because it is disturbed, the function and value of the habitat is limited.

Loma Alta Creek is highly disturbed and is fed by several concrete lined ditches. The creek extends from north of the California Street interchange to Mission Avenue. There is a riparian area just east of I-5 and north of Oceanside Boulevard that ultimately flows into the creek. Loma Alta Creek provides a limited amount of water quality filtration and flood relief; however, the creek's concrete lining and highly disturbed nature of the habitat minimizes these benefits.

San Luis Rey River is a significant resource and riparian feature within the corridor and is one of the few perennial rivers in San Diego County. The San Luis Rey River reach located within the corridor is a combination of open water habitat, freshwater marsh, arundo scrub, and riparian habitat that supports a variety of common and sensitive wildlife species. San Luis Rey River also plays an important role in flood relief and improved water quality, which results from filtering by freshwater marsh species.

A number of wetland and riparian habitat types are associated with the various waterbodies identified in the corridor including Southern Riparian, Southern Riparian Forest, Southern Cottonwood Willow, Riparian Forest, and San Diego Mesa Hardpan Vernal Pool. Southern Willow Scrub, Mulefat Scrub, Freshwater Marsh, Southern Willow Scrub/Freshwater Marsh, Southern Arroyo Willow Woodland, Coastal Brackish Marsh, Southern Coastal Salt Marsh, Salt Marsh Transition, Arundo Scrub, Disturbed Wetland, Mud Flat, Salt Flat, and Open Water.

The main subtidal habitat in the corridor is eelgrass, which is considered a special aquatic species with its distribution patterns influenced by a number of factors, including current velocity, light intensity, turbidity, nutrient influx, and red tide.

5.4.2 TREP/PWP Concerns

Environmental documentation and analysis prepared for the TREP/PWP rail and highway corridor improvements indicate that significant sensitive marine resources occur in the corridor, including coastal lagoons, rivers, streams, other wetland areas, and the Pacific Ocean, which could be affected by implementation of the proposed improvements. In addition, environmental documentation demonstrates that many of the corridor's significant marine resources, though still critical and important natural resources for the corridor, have experienced and will continue to experience varying degrees of ongoing degradation due to adjacent development and the existing transportation facilities addressed by the TREP/PWP.

5.4.2.1 Existing Water Quality Deficiencies

Chapter 3 identifies resource deficiencies in the corridor related to water quality and discusses these deficiencies in the context of runoff from corridor urbanization, development and transportation facilities, current transportation facility treatment levels of runoff, the quality of water entering the corridor's waterbodies and the ocean, and impaired waterbodies. The corridor's coastal waterbodies have experienced decades of degradation from direct and indirect impacts of development, including the transportation facilities that cross these resources, which has negatively affected water quality that is essential for protecting sensitive coastal resources and maintaining water-oriented recreational use.

TABLE 5.4-3: LAGOON SUMMARY TABLE

	Los Peñasquitos	San Dieguito	San Elijo	Batiquitos	Agua Hedionda	Buena Vista
Lagoon Owner/Operator	• State Parks • City of San Diego • NCTD • Coastal Conservancy • Los Peñasquitos Lagoon Foundation	• CDFG • San Dieguito River Park Joint Powers Authority • County of San Diego • City of San Diego • 22nd Agricultural District • NCTD • Private	• CDFG • County of San Diego • San Elijo Conservancy	• State Lands Commission • CDFG • Port of Los Angeles • Batiquitos Foundation	• CDFG • SDG&E • Leases to YMCA • City of Carlsbad • Private	• CDFG • Buena Vista Lagoon Foundation • Private
Size	460 acres	456 acres	491 acres	600 acres	286 acres	203 acres
Watershed Features	• Carroll/Soledad Canyon Creek • Los Peñasquitos Creek • Carmel Creek	• San Dieguito River • Drainages along I-5	• Escondido Creek • San Elijo Creek	• San Marcos • Encinitas • Encinas Creeks	• Agua Hedionda Creek	• Buena Vista Creek
Habitat	• Coastal salt marsh • Estuarine • Coastal/valley freshwater marsh • Southern riparian scrub • Beach • Diegan coastal sage scrub • Southern maritime chaparral • Valley and foothill grasslands	• Open water • Estuarine/palustrine flats • Salt marsh • Brackish/freshwater marsh • Coastal salt marsh • Riparian scrub • Diegan coastal sage scrub	• Open water (estuarine and fresh) • Sand/mudflats • Coastal salt marsh • Fresh/brackish marsh • Riparian • Diegan coastal sage scrub	• Eelgrass • Mud flats • Coastal salt marsh • Brackish emergent marsh • Riparian • Diegan coastal sage scrub	• Open water • Brackish/freshwater • Mudflats • Estuarine flats • Patchy salt marsh areas • Riparian • Diegan coastal sage scrub • Eelgrass	• Estuarine • Freshwater • Coastal and freshwater marsh • Southern riparian scrub • Eucalyptus woodland
Special-Status Species	• Belding's savannah sparrow • Light-footed clapper rail • Western snowy plover	• Belding's savannah sparrow and light-footed clapper rail	• California least tern • Belding's savannah sparrow • California gnatcatcher • California black rail	• California least tern • Western snowy plover • Belding's savannah sparrow • Light-footed clapper rail	• Belding's savannah sparrow • California gnatcatcher • Light-footed clapper rail	• Belding's savannah sparrow • California gnatcatcher • Light-footed clapper rail
Past & Present Restoration Efforts	• Lagoon Enhancement Plan 1985	• SCE Restoration Initiated in 2006	• San Elijo Lagoon Restoration Project (SELRP) Planning Underway	• Lagoon Enhancement Project • Port of Los Angeles/Long Beach 2006	• Dredging and Eelgrass Planting • Removal of Toxic Algae	• Buena Vista Lagoon Foundation Feasibility Study Underway
Long-term Monitoring/Management	• Tijuana Estuarine Group Monitoring • Lagoon Outlet Breaching	• Coastal Commission Monitoring Restoration Project • Lagoon & Outlet Dredging	• San Elijo Lagoon Foundation Monitoring/ Management	• Port of Los Angeles 10 year Monitoring of Enhancement Project	• Removal/Monitoring of Toxic Algae • Maintenance Dredging	• CDFG Ecological Reserve Monitoring/ Management
Land Use	• Open Space • Utility corridors • Municipal infrastructure (stormwater outfalls & sewer lines) • Small-scale restoration sites.	• Habitat Restoration • CDFG Ecological Reserve • JPA River Park	• Preserved wetland & upland areas • Passive recreational uses • Fishing • Horseback riding	• Ecological Reserve • Recreation (trails) • Interpretive Center (The Foundation) • Ag Production	• Habitat Preservation • Commercial/Industrial (Encina Power Plant desalination plant) • Recreation (YMCA camps, water sports, fishing)	• Recreation • Fishing • Hiking • Wildlife viewing • Nature tours • Ecological Preservation
Transportation Facility Crossings	• Railroad • I-5 • Coast Hwy 101	• Jimmy Durante Blvd • Coast Hwy 101 • El Camino Real • I-5	• Railroad • Hwy 101 • I-5	• Coast Hwy 101 • I-5 • Railroad	• Carlsbad Blvd/Coast Hwy • Railroad • I-5	• Railroad • Carlsbad Blvd/Coast Hwy • I-5 • El Camino Real
Lagoon System Concerns	• Impaired Waterbody • Sedimentation Siltation	• Sedimentation Siltation • Indicator Bacteria • Flooding	• Impaired Waterbody • Indicator Bacteria • Sedimentation Siltation • Eutrophic	• Sedimentation Siltation • Non-Point Source Pollution & Urban Runoff	• Impaired Waterbody • Indicator Bacteria • Sedimentation Siltation	• Impaired Waterbody • Indicator Bacteria • Sedimentation Siltation & Nutrients

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Corridor urbanization and development has cumulatively affected water quality as impermeable surfaces have increased and vegetative cover has decreased. This has resulted in significant increases in stormwater pollutant loads and runoff velocity and volume, contributing to excessive erosion and sedimentation within corridor watersheds. Hydrology and water quality are also potentially affected in the coastal bluff areas of Del Mar along the rail facility where ongoing shoreline erosion problems caused by wave action require ongoing maintenance activities along or within the shoreline to ensure the facility is protected from failure.

The majority of existing transportation facilities in the corridor were constructed before current regulations were enacted to control and treat stormwater discharge in order to protect and restore water quality. As such, many of the facilities do not include current retention or treatment methods for stormwater runoff. The corridor transportation infrastructure generally contributes pollutants to surface waters, which are most often generated from roadways, parking lots, and disturbed landscapes. However, highway facilities are a small percentage of the land area (2%) in the NCC and a relatively minor contributor to stormwater pollution. Potential pollutants from the roadway and slopes include sediment, nutrients (nitrogen and phosphorus) from native and ornamental vegetation, metals (copper, lead, and zinc), fertilizers, and pesticides. Other than runoff from parking structures associated with the rail facilities, runoff from rail improvements is relatively minor because there is limited impermeable surface area associated with rail lines.

The hydrology of the watersheds in the corridor has been directly altered by adjacent development and the existing highway and rail facilities, which have displaced watershed features including lagoon, river, stream, and drainage areas. In addition, realignment and/or channelization of inland waterways conveying stormwater through the watersheds to coastal water bodies have also resulted in modification to the hydrology of the corridor. Physical alterations of watershed features have resulted in a cumulative loss of wetland and riparian habitat areas that, in turn, has decreased the valuable biological function of these areas to naturally filter sediment and pollutants in stormwater runoff prior to discharge to the lagoons and eventually the Pacific Ocean.

The corridor contains a number of impaired water bodies that do not meet water quality standards (as defined by the Clean Water Act [CWA]), and therefore cannot support the beneficial uses for which the water body has been designated. Chapter 3 identifies impaired water bodies in the corridor (303(d) list), which include Los Peñasquitos Creek, Los Peñasquitos Lagoon, Soledad Canyon Creek, Pacific Ocean at San Dieguito Lagoon, San Elijo, Agua Hedionda and Buena Vista Lagoons, Loma Alta Slough, the Pacific Ocean at the San Luis Rey River mouth and the San Luis Rey River, as well as tributaries that discharge to the these listed waterbodies.

A number of impaired water bodies have been given special status under the CWA for which the state is required to identify waters that will not achieve water quality standards after application of effluent limits. Within the study area, Caltrans is included as a stakeholder for Investigation Order R9-2006-076 titled, “Owners and Operators of Municipal Separate Storm Sewer Systems, California Department of Transportation, Hale Avenue Resource Recovery Facility, and North County Transit District Responsible for the Discharge of Bacteria, Nutrients, Sediment, and Total Dissolved Solids into Impaired Lagoons and Adjacent Beaches and Agua Hedionda Creek.”

Chapter 3 identifies pollutants discharging with a load or a concentration that commonly exceed allowable standards and that are considered treatable by Caltrans’ approved treatment best management practices (BMPs), which are referred to as Targeted Design Constituents (TDCs). TDCs in the corridor include sediment, metals (total and dissolved zinc, lead, and copper), nitrogen, phosphorus, and general metals. Caltrans developed and implemented a BMP Retrofit Pilot Program

that was finalized in January 2004 for several locations throughout the district including along the I-5 corridor. The pilot BMPs installed along the I-5 corridor included detention devices at I-5 and Manchester Avenue**,** a wet basin at I-5 and La Costa Avenue, wet basins at the La Costa Park & Ride and the SR-78 & I-5 Park & Ride, and a biofiltration system at I-5 and Palomar Airport Road. Caltrans also currently implements maintenance BMPs that include preventative measures to ensure that ongoing maintenance activities are conducted in a manner that reduces the amount of pollutants discharged to surface waters via Caltrans' stormwater drainage systems. Maintenance BMPs are implemented in accordance with Caltrans' *Storm Water Quality Handbook–Maintenance Staff Guide*, which provides detailed instructions on how to apply approved stormwater BMPs to maintain facility operations and highway activities in a manner that provides maximum protection of water quality.

5.4.2.2 Existing Lagoon Deficiencies

Chapter 3 identifies resource deficiencies in the corridor related to water quality and discusses these deficiencies in the context of the corridor's lagoons and associated sensitive habitat areas. Corridor lagoons have historically experienced adverse impacts to water quality and to the varied habitat areas, plant, and wildlife species supported within and adjacent to the lagoons. In addition to direct displacement of habitat area resulting from adjacent development and construction of the corridor transportation facilities, watershed alterations such as the diversion of freshwater from inland waterways, excess sedimentation and siltation, and, in some cases, reconfiguration of the lagoons' inlet at the ocean, have all contributed to degradation of lagoon resources. Development encroachment has also reduced the amount and quality of transitional and upland habitat areas that typically provide buffers between adjacent land uses and the habitats and species supported by the lagoons.

5.4.2.3 Potential TREP/PWP Project Impacts

TREP/PWP concerns for protection and enhancement of marine resources relate to proposed project impacts that may occur from construction, operation, and maintenance of the rail and highway facilities, and community enhancement improvements, which include new and enhanced recreation facilities. The TREP/PWP improvement areas are located within and/or drain directly to a number of coastal waterbodies and proposed improvements that could individually or cumulatively result in short-term construction or long-term operational water quality and marine habitat impacts. Transportation improvements and facilities often generate sources of pollutants that are carried by runoff to adjacent waterbodies, thus affecting water quality and sensitive marine resources.

The proposed TREP/PWP improvements would result in changes to the project area land surface, including grading and increased impervious surfaces, and thereby could increase peak runoff rates, and volume and pollutant loads from pre-development levels.[1] TREP/PWP improvements would also require grading and landform modification that could disrupt and/or interfere with surface water flow and natural attenuation of runoff by drainage features, resulting in increased peak flood discharge, erosion, and sedimentation to receiving waterbodies. In addition, potential erosion and sedimentation impacts are of concern where existing rail improvements along Del Mar Bluffs require construction activities for the maintenance of existing shoreline protection devices permitted to ensure stability of current rail operations. Implementation of the TREP/PWP improvements could also result in short-term construction impacts to water quality due to exposure of land areas disturbed by grading and vegetation removal to increased runoff and erosion, and due to accidental discharge and spill of construction debris and pollutants from construction equipment and demolition activities, particularly

[1] *I-5 NCC Project Draft EIR/EIS* (Section 3-10), June 2010; *LOSSAN Final Program EIR/EIS* (Section 3.12), September 2007.

with bridge improvement and replacement projects that would occur above lagoons and others waterways, and with construction activities along the railway on Del Mar Bluffs.

However, without the proposed TREP/PWP infrastructure improvements, the corridor's water quality, and lagoon, wetland and riparian habitat areas will continue to degrade. The proposed transportation infrastructure improvements, when combined with the TREP/PWP Resource Enhancement Program (detailed in Chapter 6), could significantly restore and enhance marine resources and thereby improve many of the existing deficiencies of the corridor's water quality, lagoon, wetland, and riparian habitat areas. Existing rail and highway transportation facilities contribute to degraded water quality and marine habitat due to historic transportation construction practices that displaced marine habitats, and which also currently limit opportunities for retrofitting facilities to improve water quality. Absent the proposed TREP/PWP facility improvements, opportunities to modify existing transportation infrastructure to improve existing deficiencies of water quality, lagoon, wetland, and riparian habitat resources would remain extremely limited and unlikely. As such, the TREP/PWP improvements are planned and designed to remedy impacts to water quality and marine resources caused by previous construction and/or ongoing operations of the existing transportation facilities to the extent feasible. Implementing the TREP/PWP would thereby facilitate enhancement and restoration of the biological productivity and quality of marine resources including coastal waters, lagoons, and streams.

5.4.2.4 TREP/PWP Wetland Impacts and Allowable Uses

The TREP/PWP improvements appear to constitute incidental public services and, as such, fill of wetlands for the TREP/PWP improvements is permitted under Section 30233(a)(4) of the Coastal Act, where it is demonstrated there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects.

Though the plain language of Section 30233(a)(4) seems to encompass the TREP/PWP improvements, there is an argument the TREP/PWP improvements are not an allowable use for fill. In *Bolsa Chica Land Trust v. Superior Court* (1999) 71 Cal.App.4th493, the Court of Appeal stated that roadway expansions may qualify as incidental public services, but only when needed to maintain existing traffic capacity. However, this portion of the opinion was not necessary for the decision, and is *dicta*. Moreover, the facts in *Bolsa Chica* are distinguishable from the facts here: in *Bolsa Chica*, the road widening appears to have been necessary to accommodate a specific non-public project located in the coastal zone. Here, in contrast, the TREP/PWP improvements will be needed whether or not additional development is approved in the coastal zone.

Despite the plain language of Section 30233(a)(4) and the fundamental distinction between the TREP/PWP and the improvements proposed in *Bolsa Chica*, Caltrans and SANDAG acknowledge it is possible to conclude the TREP/PWP improvements could be found to fall outside of the incidental public service improvements provisions which allow for wetland fill under Section 30233(a)(4). If the TREP/PWP improvements were found inconsistent with the Coastal Act's wetland policies, the TREP/PWP should nonetheless be approved under the Coastal Act's conflict resolution provisions as discussed in Section 5.10.

5.4.2.5 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 ROW 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 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.

Potential hydrology and water quality impacts related to construction of rail improvements could result from ground-disturbing activities for double tracking, at shafts, portals, grade separations and staging areas. Sources of stormwater pollution during construction could include equipment and vehicle leaks of oil, grease, fuel, etc., construction materials, and waste material.

As part of the conceptual design at the program level, the lead agencies have proposed, at a minimum, maintaining either the same in-water footprint or a smaller footprint than existing rail corridor bridges; however, proposed rail improvements would result in unavoidable fill impacts to wetlands. Preliminary assessment indicates that approximately 26–30 acres of wetland habitat within the rail corridor could be directly impacted by proposed rail improvements. An additional 34–44 acres of wetland impacts could occur with rail projects included in the unconstrained vision project phase of the Preliminary Phasing Plan. Table 5.4-4 in this section provides a breakdown of potential rail corridor wetland impacts according to the project phases as defined in the Preliminary Phasing Plan presented in Chapter 6 (Table 6-1), and Table 6-2 in Chapter 6 includes a summary of potential wetland impacts for the entire rail corridor.

Within Oceanside and Carlsbad, there would be no net increase in the footprint of existing rail bridges over lagoons. Within Encinitas and Solana Beach, approximately 14 acres of wetlands are mapped within the proposed rail alignment options. Jurisdictional waters include San Elijo Lagoon; however, there would be no net increase in the footprint of the rail infrastructure within the lagoon.

There are approximately 30 acres of wetlands and 2,740 linear feet of non-wetland waters mapped within the alignment in Del Mar, some of which include San Dieguito River/Lagoon and Los Peñasquitos Lagoon. Either tunnel option in the Del Mar area would involve deep tunneling that would avoid disturbance along the tunnel routes to most wetland resources, except potentially at portal areas. The Camino Del Mar tunnel option would involve double-tracking across the Los Peñasquitos and San Dieguito lagoons on existing or new rail bridges, which could be done without net increase of the in-water footprint of the rail infrastructure within the lagoons. Construction along the lagoon perimeters would have direct and indirect impacts on wetland areas during construction. There may be the opportunity to replace the existing bridge across Los Peñasquitos with a causeway structure that would increase the tidal flow and remove the embankment from the lagoons. This would require extensive in-water work, causing higher impacts during construction, but would result in a long-term beneficial impact to the lagoon, which would be determined in project-level analyses. The I-5 tunnel option would avoid crossing Los Peñasquitos Lagoon, but the design concept would include a new, elevated structure along the south edge of San Dieguito Lagoon, following the southern edge of San Dieguito Racetrack View Drive, which may result in potential new, temporary and permanent impacts on wetland resources. The I-5 tunnel option would allow for the removal of the existing Los Peñasquitos rail bridge structures in the future, which would have temporary impacts on the lagoon from in-water work to remove the existing structure.

There are two tunnel alternatives in the University City area; however, only a minor portion of these alignment options fall within the coastal zone. Potential impacts to wetlands would be minimal because of the deep tunneling with either option and could occur at the portal areas only.

In all cases, temporary construction impacts from project activities in and around the lagoons could affect habitats associated with the lagoons. Potential impacts include in-water work for new infrastructure, possible removal of existing structures, turbidity, and increased sedimentation during construction; however, as discussed below, it is also anticipated that proposed bridge replacement projects over the lagoons and other coastal waterbodies could have a beneficial effect on hydrology and water quality by constructing new bridges that better convey flood waters, allow for improved tidal flushing, and thereby improve water quality and marine resources.

5.4.2.6 I-5 Highway Corridor Impact Assessment

Operational and construction activities for the proposed highway improvements could affect water quality and marine habitats. The *I-5 NCC Project Draft EIR/EIS* compares and analyzes existing and proposed additional pavement areas between the four proposed Build Alternatives. The 10+4 with Barrier Alternative would have the highest percentage of additional impervious area, followed by the 8+4 with Barrier Alternative. The 8+4 with Buffer Alternative has the lowest percentage of additional impervious area followed by the 10+4 with Buffer Alternative. The increase in impervious surface area from the proposed highway improvements could be as much as 108% with the 10+4 with Barrier Alternative. While the increased impervious area is significant in the context of the existing highway facility, the maximum Caltrans tributary area discharging to any of the hydrologic areas/subareas in the corridor would continue to be less than 2%.

In addition, pollutants from construction activities could be generated from construction materials as well as construction activities. Pollutants generated from construction materials could include vehicle fluids, asphaltic emulsions from paving activities, joint and curing compounds, concrete curing compounds, solvents and thinners, paint, sandblasting material, landscaping materials, treated lumber, PCC rubble, and general litter. Pollutants from construction activities could include clearing and grubbing, grading operations, soil import operations, sandblasting, landscaping, and utility excavation.

TREP/PWP improvements over the corridor's lagoons would result in unavoidable impacts to wetlands. Wetland habitat impacts associated with each of the Build Alternatives include impacts at the six lagoons, as well as the San Luis Rey River, Loma Alta Creek, Encinas Creek, Cottonwood Creek, and numerous small lined and unlined drainage ditches that run parallel to I-5. All drainage ditches, arundo scrub, and salt marsh transition habitats have been included in the wetland habitat impact analysis for proposed highway improvements. The majority of the impacts to wetlands are associated with facility widening at the lagoons. The *I-5 NCC Project Draft EIR/EIS* (Section 3.17) analyzes and provides a comparison of potential coastal wetland impacts for the four proposed Build Alternatives. Caltrans has determined that approximately 25–33.5 acres of coastal wetland habitat within the highway corridor could be directly impacted by proposed highway improvements. Temporary impacts to coastal wetlands are also identified in the I *I-5 NCC Project Draft EIR/EIS* and could range up to approximately 20 acres. Table 5.4-4 in this section provides a breakdown of potential highway corridor wetland impacts according to the project phases as defined in the Preliminary Phasing Plan presented in Chapter 6 (Table 6-1), and Table 6-2 in Chapter 6 includes a summary of potential wetland impacts for the entire highway corridor.

There is little difference in the amount of potential wetland impacts for each of the proposed highway alternatives in many of the individual watersheds. The project footprint would be the same in the San Clemente, Los Peñasquitos, Loma Alta, and San Luis Rey watersheds. The greatest lagoon impacts

would be to Agua Hedionda and Batiquitos Lagoons because of the existing narrow fill slopes under the current I-5 alignment and the closer proximity of wetlands to the roadway. Absent appropriate mitigation, impacts from the proposed highway improvements to the lagoon habitats could incrementally decrease the quality and quantity of wetland habitat and the lagoons' abilities to provide flood-relief and water-quality functions.

Smaller wetland and riparian areas associated with the corridor's various streams and drainages would also be affected. Drainages feeding into Cottonwood Creek, Encinas Creek, and those parallel to I-5, north of Genesee Avenue, would have portions placed into culverts. Although these smaller drainages do not present the high quality habitat that the lagoons and San Luis Rey River provide, the highway improvements would result in placing several of these small wetlands and riparian areas into culverts, which could eliminate potential for wildlife habitat, flood control, or water quality functions.

Additional impacts to water quality and marine habitats could occur as a result of implementation of community enhancement projects intended to create public access and recreation opportunities within and along sensitive marine resources. If not properly located, constructed and maintained, public use could result in erosion, littering or other pollutant releases within and along public access and recreation facilities.

5.4.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

The proposed TREP/PWP provides an opportunity to implement a comprehensive, corridor-wide program to restore water quality and wetland habitat along the 30-mile NCC coastline. Implementation of a corridor-wide water quality enhancement program would help to restore, where feasible, watershed features previously displaced or altered by the existing transportation facilities, and would include transportation facility improvements incorporating current BMPs to reduce contaminant loads in stormwater, which would serve to restore and facilitate the long-term maintenance of water quality within the corridor's watersheds.

The TREP/PWP improvements would provide an opportunity to modify rail and highway bridge designs over coastal waterbodies, which could have a beneficial effect on water quality and marine resources by offsetting wetland fill impacts with creation of new wetland areas, and providing for improved tidal flushing and stream flow, where feasible. In conjunction with the opportunity to potentially design new rail and highway bridges in the corridor to improve water quality and wetland habitat, the TREP/PWP provides the additional opportunity to enhance significant marine resources and long-term biological productivity of coastal waters by facilitating the development and implementation of a comprehensive Resource Enhancement Program. This program, detailed in Chapter 6, provides a unique opportunity to assess proposed transportation infrastructure and community enhancement improvements with varying constraints and opportunities to implement a corridor-wide resource enhancement program. Such opportunities include facilitation of major lagoon restoration efforts that include improved tidal circulation in the San Elijo and Buena Vista Lagoon systems, preservation, and/or restoration via land purchase of upland habitat areas, and restoration of riparian habitat areas within inland waterways. Restoring tidal circulation in lagoon systems and enhancing riparian and upland habitat areas would significantly improve water quality and the ecological value of the lagoons, riparian systems, and adjacent upland areas to better support environmentally sensitive habitat areas (ESHAs), special-status species and wildlife. Table 5.4-4 identifies the potential rail and highway wetland impacts discussed in this section by project phase in conjunction with the corridor-wide wetland habitat mitigation and enhancement opportunities provided by the Resource Enhancement Program which is further detailed in Chapter 6.

5.4.3.1 TREP/PWP Lagoon, Wetland and Riparian Enhancement Opportunities

The TREP/PWP includes a comprehensive Resource Enhancement Program that would serve to significantly enhance water quality and marine resources in the corridor by implementing a combination of traditional and non-traditional measures to mitigate coastal resource impacts of the proposed mobility improvements, and to enhance and restore resources beyond standard mitigation requirements. Chapter 6 details the TREP/PWP Resource Enhancement Program as part of the TREP/PWP Implementation Framework. Given the unique nature of the facility improvements that encompass areas containing significant resources, the program includes multiple elements for completing and facilitating resource enhancement and habitat mitigation on a corridor-wide level, including standards that require no net loss of habitat, habitat preservation, and facilitating comprehensive lagoon planning, restoration, and maintenance programs.

Where feasible, the Resource Enhancement Program would create new wetland habitat and enhance degraded wetland habitat before transportation improvements are implemented, thus eliminating even a temporary loss of habitat in the corridor. In addition, the program would achieve no net loss of wetland habitat to ensure that the quantity, variety, and range of coastal wetlands in the corridor would not be diminished due to the proposed rail and highway improvements. The program also provides for habitat preservation, thereby facilitating the preservation of remaining wetland resources in the corridor.

In addition, the TREP/PWP would facilitate the development and implementation of comprehensive lagoon restoration efforts for San Elijo and Buena Vista Lagoons through infrastructure improvements where the facilities cross the lagoons and, where determined appropriate, could provide endowments for lagoon planning, restoration and maintenance. These efforts would not only serve to substantially enhance and restore water quality in the corridor, but they would also serve to restore, enhance, and protect different habitat types within the lagoon ecosystems. While these restoration efforts would not focus on traditional in-kind habitat replacement mitigation ratios, the programs would result in the restoration and enhancement of an integrated ecosystem, providing improved habitat for fish, birds, and benthic organisms that would adequately compensate for the loss of wetland habitat occurring from the TREP/PWP rail and highway improvements.

Opportunities for lagoon, wetland, and riparian resource enhancement have been reviewed in all the watersheds along the NCC. As part of this effort, SANDAG/Caltrans commissioned a San Diego Regional Lagoon Study to document the status and potential restoration opportunities for wetland habitat within the corridor's lagoons. Phase 1 of the study provides an overview of the corridor lagoons, physical and biological issues that may affect restoration efforts, and completed and potential future restoration actions. As the TREP/PWP Resource Enhancement Program includes measures for facilitating comprehensive lagoon planning, restoration, and maintenance programs, the Phase I study evaluates potential restoration opportunities within each lagoon focused on 1) conventional earthmoving wetland restoration opportunities; and 2) restoration that could occur as a result of changes in bridge structures that might reduce tidal muting east of I-5 (hydrodynamic restoration) and thus restore tidal circulation and enhance the overall lagoon ecosystem.

TABLE 5.4-4: POTENTIAL WETLANDS IMPACTS AND MITIGATION/ENHANCEMENT OPPORTUNITIES (BY PHASE)

Phase	Transportation Improvements	Impacts (Acres)	Creation (Acres)	Restoration (Acres)	Preservation (Acres)
Initial-Term	2 HOV lanes & noise barriers - Manchester Ave to La Costa Ave	I-5: 8-11	San Dieguito River Valley: 50 Hallmark: 4.2 Pardee Carmel Valley: 11.5		Hallmark: 1.5
	2 HOV lanes & noise barriers – La Costa Ave to SR 78				
	2 ML from La Jolla Village Dr to SR 56, includes Voigt DAR & I-5 /I-805 HOV Connector				
	2 ML from SR 56 to Manchester Ave, includes Manchester DAR & San Elijo Bridge Replacement				
	Genesee SB Operational Improvements				
	5a - Oceanside Coaster Stub Track	LOSSAN: 5.5–7			
	5c - Oceanside Metrolink Stub Track				
	8 - Carlsbad (CP Carl to CP Farr) Double Track				
	22a - Sorrento Valley Double Track				
	23 - Sorrento to Miramar Phase I				
	35 - Poinsettia Station Run-Thru Track				
	COMBINED INITIAL-TERM TOTAL	13.5–18			
Mid-Term	2 ML from Manchester to Agua Hedionda Lagoon, includes Cannon DAR, Batiquitos and Agua Hedionda Lagoons Bridge Replacements	I-5: 13–16			
	I-5/SR56 Interchange Improvements				
	I-5/SR78 Interchange Improvements (Pending)				
	3 - CP Eastbrook to CP Shell Double Track	LOSSAN: 11.5–13			
	6 - Carlsbad Village Double Track				
	12 - Encinitas Pedestrian Crossings				
	13 - Encinitas Station Parking				
	15 - CP Cardiff to CP Craven - San Elijo Lagoon Double Track				
	16 - Solana Beach Station Parking				
	COMBINED MID-TERM TOTAL	24.5–29			

TABLE 5.4-4: POTENTIAL WETLANDS IMPACTS AND MITIGATION/ENHANCEMENT OPPORTUNITIES (BY PHASE) (CONTINUED)

Phase	Transportation Improvements	Impacts (Acres)	Creation (Acres)	Restoration (Acres)	Preservation (Acres)
Long-Term	2 ML from Past Agua Hedionda Lagoon to SR 78	I-5: 4–6.5			
	4 ML from SR 78 to Harbor Drive, includes Oceanside Blvd DAR & Buena Vista Lagoon Bridge Replacement				
	Construct Braided Ramps from Genesee to Sorrento Valley				
	5b - Oceanside Station Parking	LOSSAN: 9–10			
	7 - Carlsbad Village Station Parking				
	9 - Carlsbad Poinsettia Station Parking				
	10 - CP Ponto to CP Moonlight Double Track				
	14 - CP Moonlight to CP Swami Double Track				
	17 - San Dieguito Bridge/Double Track				
	18 - Del Mar Fairgrounds Platform				
	24 - Sorrento to Miramar Phase II				
	COMBINED LONG-TERM TOTAL	13–16.5			
NCC TOTALS (ALL PHASES EXCLUDING VISION)		51–63.5	65.7	0	1.5
Vision	11 - Leucadia Blvd Grade Separation	LOSSAN: 34–44			
	19 Del Mar Bluffs Stabilization Phase 3				
	20/21 - Del Mar Tunnel - Camino Del Mar / Peñasquitos Double Track Option - I-5 / Peñasquitos Option				
	22b - Peñasquitos Double Track				
	25/26 - UTC Tunnel - UTC Alignment Option - I-5 Alignment Option				
	VISION TOTAL	34–44	0	0	0

The Phase I study identifies San Dieguito Lagoon (4 sites) as having high potential for conventional restoration opportunities (approximately 73.8 acres) with additional, more moderate opportunities for conventional restoration identified for Agua Hedionda (4 sites), Batiquitos (1 site), and San Elijo (1 site) Lagoons. The study identifies Agua Hedionda, Batiquitos, and San Dieguito Lagoons as having the most significant opportunities for hydrodynamic restoration; however, more detailed hydrologic studies on the potential for the hydrodynamic restoration for all the corridor lagoons are being conducted in Phase II of the study currently underway. The Phase I study concludes that Los Peñasquitos and Buena Vista Lagoons have no potential for hydrodynamic restoration east of I-5, noting that highway facility infrastructure crosses only the creek systems discharging to Los Peñasquitos Lagoon, and thus does not affect tidal circulation in that system, and because the water level in Buena Vista Lagoon is controlled by a weir at its entrance, thereby rendering potential effects of the highway bridge on tidal circulation inconsequential at this time for purposes of hydrodynamic restoration.

The Phase II analysis will further evaluate possible constraints to conventional and hydrodynamic restoration activities for the lagoon systems including potential sensitive habitat and species impacts, private property and access limitations, and conflicts among restoration objectives. Phase II of the study will examine all aspects of lagoon tidal and freshwater hydrology, restoration constraints and opportunities, the potential effects of bridge widening, and potential bridge designs that could improve tidal circulation east of I-5, thus resulting in enhancement of the existing lagoon system through improved water quality and increased tidal inundation and inter-tidal wetland habitat. In addition to this study, the San Elijo Lagoon Restoration Project is currently underway and is, in part, being funded by SANDAG/Caltrans, which is evaluating various factors that may affect tidal circulation including the lagoon inlet, bridges for South Coast Highway 101, rail and highway facilities, and the existing tidal regime within the lagoon.

SANDAG and Caltrans expect to identify additional resource enhancement opportunities in the pending Phase II Study. The Resource Enhancement Program, presented in Chapter 6, provides that SANDAG and Caltrans will develop a process that allows the region to prioritize and implement resource enhancement projects prior to, or concurrent with, transportation project implementation such that transportation project impacts are adequately mitigated and regionally significant enhancement projects implemented to achieve the region's natural resource restoration and enhancement goals. It is assumed that permitting for development associated with large-scale lagoon restoration would be separately permitted consistent with the Coastal Act.

Los Peñasquitos Lagoon

Construction of a new highway bridge at Sorrento Valley Road/Roselle Street, in place of the culvert by the interchange of I-5 and SR-56, would enhance flows through the lagoon and facilitate wildlife crossing under the I-5.

In addition, SANDAG/Caltrans acquired the Pardee Carmel Valley property adjacent to and north of Las Penasquitos Lagoon which would provide 11.5 acres of wetlands creation, 10.7 acres of upland habitat creation, and 5.7 acres of upland habitat restoration.

Existing view of Los Peñasquitos Lagoon, looking northwest.

San Dieguito Lagoon

Existing aerial view of San Dieguito Lagoon, looking east.

SANDAG and Caltrans, in cooperation with the San Dieguito River Valley Joint Powers Authority (JPA), propose to create approximately 50 acres of coastal salt marsh adjacent to the Southern California Edison restoration project in San Dieguito Lagoon. In addition to the 50 acres of coastal salt marsh created, approximately 57 acres of upland habitat would be created along the berms around the wetland and in a native grassland floodplain area adjacent to the wetland. Approximately 2.73 acres of the created coastal salt marsh habitat would be used by the JPA for mitigating impacts from their trail system and treatment wetlands. The remainder of the created coastal salt marsh and upland habitat would be used as mitigation for the I-5 NCC Project. The proposed plan has already been reviewed and found to be compatible with the larger restoration project in San Dieguito Lagoon.

SANDAG/Caltrans, the City of Del Mar, and the San Dieguito River Valley Land Conservancy (SDRVLC) either own or are considering purchase of several small parcels of land along Racetrack View Drive and the San Dieguito River. These parcels are currently on fill vegetated with ice plant with salt marsh habitat at the river's edge. Resource enhancement efforts would create saltmarsh habitat on the approximately 2 acres of fill habitat, and the property would be turned over to the SDRVLC for management in perpetuity.

In addition, SANDAG/Caltrans purchased the Dean Family Trust site immediately east of I-5 and south of San Dieguito Lagoon. The area is currently vegetated with weedy species and some coyote brush (*Baccharis pilularis*). Approximately 5 acres of this parcel are proposed for a detention basin or water-quality treatment area. 21.6 acres of the property would be used to create upland habitat and 1.5 acres with existing upland habitat would be preserved.

San Elijo Lagoon

Existing aerial view of San Elijo Lagoon, looking south.

Currently, the City of Encinitas, USACE, USFWS, CDFG, California Coastal Conservancy, County of San Diego, and the San Elijo Lagoon Conservancy are working to complete a draft EIR/EIS for restoration of the lagoon for environmental compliance. This includes restoration of the hydrological regime and marsh habitat which is experiencing significant conversion from mudflats and low marsh to middle and high marsh habitat. SANDAG/Caltrans have participated and continue to contribute funding to the planning, technical, and environmental review process to determine the optimal bridge opening at I-5 and comprehensive restoration opportunities for San Elijo Lagoon. Based on this work, it is likely that the I-5 bridge over San Elijo Lagoon would be lengthened, which could create wetland habitat within existing bridge footprint. The restoration project could

ultimately facilitate the restoration of many hectares of marsh and help to ensure its continued functioning. Although this would not create a large quantity of new wetlands, the restoration project would help enhance all lagoon functions and decrease tidal muting effects. This large regional restoration project would greatly enhance coastal lagoon habitat, in particular mud flats, which are relatively rare within the region. In addition, upland slopes around the proposed DAR at Manchester Avenue would be planted with CSS to mitigate for upland impacts.

Existing view of San Elijo Lagoon, looking east.

Batiquitos Lagoon

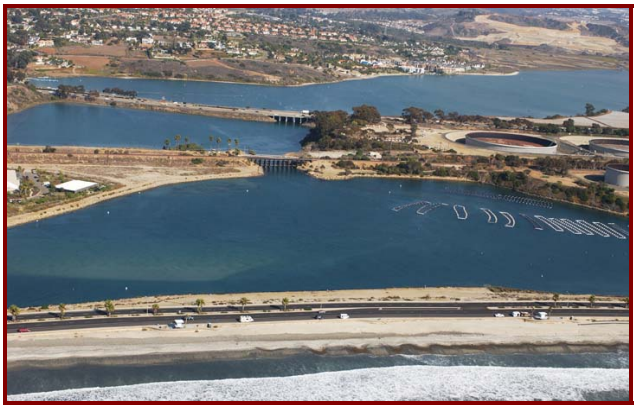
Batiquitos Lagoon has already undergone a large-scale restoration project funded by the Port of Los Angeles that began in 1994. No additional large-scale mitigation opportunities have been identified at this lagoon, but several parcels for preservation of upland habitat have been identified, and some small parcels along the edge of the lagoon have been identified for purchase and preservation as permanent open space.

Existing aerial view of Batiquitos Lagoon, looking east.

Hydrodynamic restoration opportunities are being explored as part of the Phase II San Diego Regional Lagoon Study. In addition, SANDAG/Caltrans purchased the La Costa which supports approximately 20.5 acres of coastal sage scrub habitat occupied by California gnatcatcher on the south side of La Costa Avenue just east of I-5 on the bluff overlooking the lagoon, which is proposed for preservation.

Agua Hedionda Lagoon

SANDAG and Caltrans have acquired two areas that were proposed for development, referred to as the Hallmark and Lazar properties. These properties are a combination of disturbed coastal sage scrub, salt marsh, and disturbed habitat along the northern shore of the eastern basin. Approximately 1.5 acres of wetland habitat and 14.4 acres of upland habitat have been identified for preservation. Habitat enhancement would include the creation of approximately 4.2 acres of salt marsh and combination of restoration and preservation of remaining coastal sage scrub habitat. Some of



Existing aerial view of Agua Hedionda Lagoon, looking east.

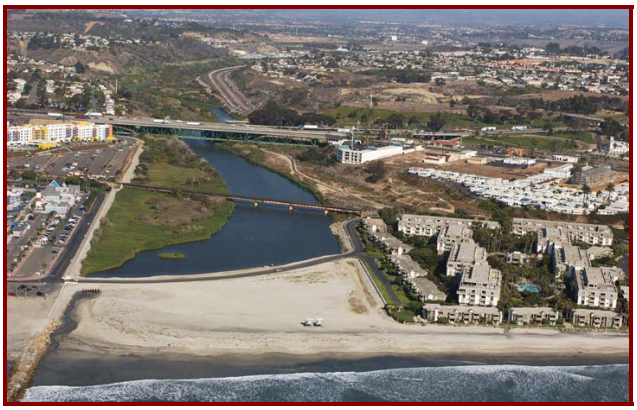
the coastal sage scrub habitat is currently occupied by the threatened coastal California gnatcatcher. This site would be transferred to the California Department of Fish and Game and managed as part of their Ecological Reserve.

Buena Vista Lagoon

Existing aerial view of Buena Vista Lagoon, looking east.

The Buena Vista Lagoon Foundation and Technical Advisory Committee (BVTAC) have proposed options to keep the lagoon all freshwater, to have a mix of salt and freshwater habitat, or open up tidal flushing to convert Buena Vista Lagoon to all saltwater. Currently, the BVTAC is pursuing the proposal to convert Buena Vista Lagoon to all saltwater habitat. The BVTAC will complete a draft EIR/EIS for restoration of the lagoon for environmental compliance. Depending on the preferred alternative, this would require modifying the inlet from the ocean, a modified bridge at I-5 and other restoration components. SANDAG and Caltrans are currently working with the CDFG and the BVTAC to identify key restoration opportunities that could serve as future mitigation for the NCC projects.

San Luis Rey River



Existing aerial view of the San Luis Rey River inlet, looking east.

The San Luis Rey River near I-5 is a large open water channel with primarily freshwater marsh and arundo scrub along the banks. Two projects proposed for the area, Coast Highway Seismic Retrofit and the recently completed Pacific Street Bridge have already proposed restoration of the wetlands along the banks of the river through exotic removal and revegetation with natives. Mitigation for impacts at the San Luis Rey River would be completed by restoring areas on site.

Cottonwood/Moonlight Creek

There is some riparian habitat along this drainage, but the habitat is also disturbed with giant reed, pepper trees, nasturtium (Tropaeolum majus), ice plant, and eucalyptus trees. This creek could be restored, as could the slopes that are a mixture of disturbed CSS and ornamental plants. Restoration of this area with a walking trail along the sewer easement has been identified in the as a community enhancement by Caltrans landscape architecture and by the City of Encinitas as a preferred option. Approximately 3.5 acres of riparian habitat and 5.0 acres of CSS could be restored in this area.

Encinas Creek

Encinas Creek is a small, constricted creek with no lagoon at the outfall to the ocean. The creek flows through culverts under I-5 and through the Encinas Sewer Treatment Plant west of I-5. Immediately east of I-5 the creek is heavily disturbed with invasive plant species, trash, and poor water quality.

Upstream of I-5, a few mitigation projects have been completed already. There may be additional opportunities to remove exotic species and restore habitat throughout Encinas Creek.

Loma Alta Creek

Loma Alta Creek is a very disturbed constricted creek that flows parallel to Oceanside Boulevard in a developed portion of Oceanside. West of I-5, the creek is channelized where it flows through a trailer park to an industrial area prior to reaching the ocean through a highly constricted culvert. The portion through the trailer park is within concrete channel with little area for restoration; west of the trailer park, however, the creek is in an earthen channel surrounded by industrial businesses. There may be an opportunity in this portion of the creek to greatly enhance the wetland habitat and water quality before the water empties into the Pacific Ocean.

5.4.3.2 LOSSAN Rail Corridor Opportunities

Proposed rail improvements include replacement of a number of bridge structures over waterbodies, which could have a beneficial effect on hydrology and water quality. Alignment options that would modify existing bridge structures across lagoons could allow for improved tidal flushing, improving water quality, and marine habitat. There may be the opportunity to replace the existing bridge across Los Peñasquitos with a partial causeway structure that would increase the tidal flow and remove the embankment from the lagoons, and the I-5 tunnel option could allow for the removal of the existing Los Peñasquitos rail bridge structures in the future. In addition, proposed rail options that would remove the existing rail corridor from coastal bluff areas in Del Mar would reduce long-term bluff erosion by eliminating active rail operations and the need for ongoing maintenance activities of the existing shoreline protection system along the bluffs. The feasibility and potential benefits and impacts of rail improvements would be determined in project-level analyses; however, as part of the conceptual design at the program level, the lead agencies have proposed, at a minimum, maintaining either the same in-water footprint or a smaller footprint than the existing rail corridor where improvements would cross coastal waterbodies. The footprint of existing bridges across the corridor's waterbodies would not be increased under the proposed rail improvements plan.

Benefits to water quality from the proposed rail improvements could also result from the reduction in vehicle miles traveled (VMT) on area highways that may occur with increased and improved rail service as fewer roadway pollutants would be present in the surface run-off from the roadways. Any reduction in VMT with the implementation of the rail Improvements, in conjunction with the proposed highway improvements that would specifically target improving water quality on I-5, would reduce and better treat the pollutant burden in stormwater runoff from area highways resulting in a beneficial impact to water quality.

5.4.3.3 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements shall be sited and designed in a manner such that marine resources are maintained, enhanced, and where feasible, restored. Special protection should be given to areas and species of special biological or economic significance. Uses of the marine environment should 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. Where feasible, coastal water quality should 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.

Because project-level analysis for proposed rail improvements will not occur until project alternatives are chosen; preliminary design, engineering, and resource impact analyses have been developed; and mitigation measures and monitoring plans prepared, the analysis contained herein for the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary impact assessment for marine resources, and design and development strategies to address potential impacts. The following design and development strategies provide guidance in addressing potential impacts to marine resources for specific rail development projects. As proposed rail improvement plans are further developed, additional design and development strategies to address potential impacts to marine resources would be evaluated by the Lead Agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. Project-level analysis for potential water quality and marine habitat impacts of rail improvements should be conducted and subject to review during subsequent project-specific federal consistency review to assess and identify all potential permanent or temporary impacts to water quality and marine habitats and appropriate mitigation measures to ensure project consistency with Coastal Act policies 30230, 30231 and 30233. Project level analysis should include the following technical studies:
   - Field surveys of potential surface water impacts to further analyze potential impacts on water quality and to seek required permits from the appropriate agencies.
   - Identification of potentially substantial alteration in water-flow and drainage patterns, including increased stormwater runoff, increased groundwater discharge or reduction of groundwater recharge. Project-specific studies should determine acceptable designs and construction techniques to minimize adverse impacts of increased sedimentation that would occur during in-water work in the lagoons and elsewhere. Potential minimization measures and timing windows should be developed in consultation with resource agencies and lagoon planning.
   - Analysis of how the different alignment options would contribute to total additional impervious surface and the subsequent potential additional impacts on surface runoff. This analysis would also identify potential mitigation measures, including onsite retention facilities.
   - Delineation of waters and wetlands to determine the extent of USACE, CCC and CDFG jurisdiction, and consultation conducted with these agencies regarding appropriate mitigation.
   - Evaluation of impacts and benefits of removal of existing earthen fill from lagoon crossing structures, and the design options for new structures to improve coastal hydrology and hydrodynamics in tidal lagoons.
2. Permit requirements as part of project-level review would include Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permits. Under the requirements of the NPDES California Department of Transportation Statewide Storm Water Permit and the Construction General Permit, an SWPPP would be developed during construction and implemented to reduce pollutants in stormwater discharges and the potential for erosion and sedimentation. The SWPPP would include BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements, stormwater management, and channel dewatering for all stream and lake/lagoon crossings. Regional NPDES permit requirements would be followed and BMPs, as required for new developments, would be implemented. These may include measures to provide permeable surfaces where feasible and to retain and treat stormwater onsite using catch basins and treatment (filtering) wetlands, especially in areas around existing stations if the areal extent of surface parking is expanded or at new stations where new parking surface is constructed. Measures to manage the overall amount and quality of stormwater runoff to regional systems would be detailed as part of the SWPPP. BMPs may include the following:

- Practices to minimize the contact of construction materials, equipment, and maintenance supplies with stormwater
- Practices to reduce erosion of exposed soil including soil stabilization, watering for dust control, perimeter silt fences, placement of rice straw bales, and sediment basins
- Practices to maintain water quality including filtration, detention, and retention systems, constructed wetland systems, biofiltration / bioretention systems, grass buffer strips, ponding areas, organic mulch layers, planting soil beds, sand beds, or vegetated systems (biofilters) such as vegetated swales and grass strips designed to convey and treat either shallow flow (swales) or sheetflow (filter strips) runoff.

3. A spill prevention and emergency response plan should be implemented to handle potential fuel or other spills for all rail construction and maintenance.
4. Impacts to lagoon, riparian or other isolated wetland habitats should be fully mitigation pursuant to the resource enhancement program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration program mitigation.
5. Options and benefits for coordinating rail and highway infrastructure construction plans in the lagoon areas should be analyzed for potential benefits to lagoon systems and feasibility for rail and highway project implementation.
6. All vegetated stormwater basins, vegetated filter strips, vegetated swales, and other natural drainage features to be installed per the TREP/PWP may exhibit ephemeral wetland and/or habitat characteristics over time, however, it should be recognized that their primary function is for water quality filtration and treatment, flow control, and infiltration. As such, maintenance within these devices on a regular basis is expected and necessary to maintain their intended function, and is therefore allowed pursuant to this TREP/PWP.

5.4.3.4 I-5 Highway Corridor Opportunities

In light of the inherent limitations to retrofit the existing highway facilities to address adverse impacts associated with polluted stormwater runoff, TREP/PWP improvements involve construction of new facilities and significant facility modifications which provides an opportunity to address this concern. The proposed TREP/PWP highway improvements would implement treatment BMPs for both the new and existing impervious pavement as each portion of the corridor project is designed to the maximum extent practicable with the best available technology. The program of improvements would include analyzing each individual hydrological area from a water quality perspective in relation to the impaired receiving water bodies. This is currently being done as Caltrans is an active member of several lagoon stakeholder groups throughout the corridor monitoring and eventually implementing measures to address the total maximum daily loads of constituents identified by the San Diego Regional Water Quality Control Board. Combined with these efforts, the TREP/PWP would provide for a more comprehensive approach to analyze the hydrology of each individual hydrological area for BMP implementation thus improving water quality of the corridor.

TREP/PWP improvements would include replacement of a number of bridge structures over waterbodies, which could have a beneficial effect on hydrology and water quality impacts (see also Section 5.8 discussion of drainage and flooding). Implementation of highway improvements that modify existing bridge structures across lagoons, streams, and drainages would allow for improved tidal flushing and water conveyance in inland waterways thereby improving water quality and marine habitats.

Efforts to minimize fill in corridor lagoons examined using retaining walls; however, the liquefied soils at the lagoons would require deep footings of over 82 feet and would be prohibitively expensive. As such,

SANDAG/Caltrans are evaluating potential restoration opportunities within each lagoon focused on 1) conventional habitat creation and restoration through earthmoving activities; and 2) hydrodynamic restoration opportunities to improve the tidal inlets, increase the tidal prism, and reduce tidal muting through modifications to infrastructure features (e.g., bridges) in the lagoons. Caltrans, in conjunction with a number of resource agencies, are looking at potentially building longer bridges at San Elijo Lagoon and Buena Vista Lagoon, which would result in removing some of the existing fill at the lagoons. These potential improvements would result in substantial benefits to water quality and marine habitats by increasing overall water circulation in the lagoon, possibly facilitating a more natural process of tidal flushing and slowing freshwater flows from inland waterways that convey sediment and pollutants during significant rainfall events. This could reduce build-up of sedimentation and water pollutants within the lagoons, which substantially affects biological productivity and quality of coastal waters.

5.4.3.5 I-5 Highway Corridor Policies and Implementation Measures

In addition to potential replacement and redesign of bridge structures over corridor lagoons, Caltrans would implement the following policy and implementations measures to ensure that proposed improvements are designed, implemented, and maintained to provide for maximum protection of water quality and wetlands. Notice of Impending Development (NOID) submittals for highway, community, and resource enhancement project implementation that would potentially affect marine resources should demonstrate compliance with the following policy and implementation measures.

Policy 5.4.1: NCC transportation facility and community enhancement projects should be sited and designed so that marine resources are maintained, enhanced, and, where feasible, restored. Special protection should be given to areas and species of special biological or economic significance. Uses of the marine environment should 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. Where feasible, coastal water quality should 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.

Implementation Measure 5.4.1: Operational and construction BMPs should be implemented for all maintenance and construction activities for highway facilities in accordance with the Statewide Storm Water Management Plan (SWMP) and the provisions of the NPDES Permit (Order 99-06-DWQ).

Implementation Measure 5.4.2: Maintenance BMPs should be implemented for all highway facility improvements to provide preventative measures to ensure that maintenance activities are conducted in a manner that reduces the amount of pollutants discharged to surface waters via Caltrans stormwater drainage systems. Maintenance BMPs should be implemented for the life of the facility in accordance with the *Storm Water Quality Handbook–Maintenance Staff Guide* and should include litter removal, toxics control, street sweeping, or other approved measures contained in the *Storm Water Quality Handbook–Maintenance Staff Guide*.

Implementation Measure 5.4.3: Design Pollution Prevention BMPs should be implemented for all highway facility improvements to prevent downstream erosion, to stabilize disturbed soil areas and maximize vegetated surfaces consistent with Caltrans Construction General Permit standards. Design pollution prevention BMPs should consider downstream effects related to potentially increased runoff and flow caused by proposed improvements and may include the following measures:

- Preservation of Existing Vegetation
- Concentrated Flow Conveyance Systems
  - Ditches, Berms, Dikes and Swales
  - Overside Drains
  - Flared Culvert End Sections
  - Outlet Protection/Velocity Dissipation Devices
- Slope/Surface Protection Systems
  - Vegetated Surfaces
  - Hard Surfaces
- Other Caltrans-Approved Measures

NOID submittals for proposed highway facility improvements should identify the type and location of design pollution prevention BMPs to be implemented and maintained for specific project improvements consistent with Caltrans Construction General Permit standards and the Caltrans *Project Planning and Design Guide*.

Implementation Measure 5.4.4: Treatment BMPs should be implemented for all highway facility improvements to prevent or minimize the long-term potential impacts from Caltrans facilities or activities. Required treatment BMPS should be limited to those determined to be technically and fiscally feasible (i.e., constructible, maintainable, and effective at removing pollutants to the maximum extent practicable), which may include:

- Biofiltration Systems
- Infiltration Devices
- Wet Basins
- Detention Devices
- Dry Weather Flow Diversions
- Media Filters
- Gross Solid Removal Devices
- Other Caltrans-Approved Measures

NOID submittals for proposed highway facility improvements should identify the type and location of treatment BMPs, consistent with the Caltrans *Project Planning and Design Guide*, and should confirm the feasibility of identified treatment methods in relation to right-of-way limitations, environmental constraints or hydraulic capacity. Where treatment BMPs cannot be incorporated due to above-mentioned reasons, vegetation should be maximized and every effort will be made to ensure the successful establishment of landscaping and erosion control throughout the project limits.

Implementation Measure 5.4.5: Construction and phasing plans for highway improvements should preserve the existing vegetation outside the work areas, stabilize slopes with vegetative cover and keep the total paved area to the maximum extent practicable.

Implementation Measure 5.4.6: Construction BMPs should be implemented for all highway facility improvements to reduce pollutants in stormwater discharges and to eliminate non-stormwater discharges. Construction BMPs should be implemented according to Caltrans' *Construction Site Best Management Practices (BMPs) Manual* and may include the following measures:

- Temporary Soil Stabilization
- Temporary Sediment Control
- Wind Erosion Control
- Tracking Control
- Non-Storm Water Management
- Waste Management and Materials Pollution Control

NOID submittals for proposed highway facility improvements should include a construction phasing and staging plan that identifies the type and location of all construction BMPs to be implemented as part of project construction.

Implementation Measure 5.4.7: Impacts to lagoon, riparian or other isolated wetland habitats should be fully mitigated pursuant to the Resource Enhancement Program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration program mitigation.

Implementation Measure 5.4.8: Options and benefits for coordinating rail and highway infrastructure construction plans in the lagoon areas should be analyzed for potential benefits to lagoon systems and feasibility for rail and highway project implementation.

Implementation Measure 5.4.9: All vegetated stormwater basins, vegetated filter strips, vegetated swales, and other natural drainage features to be installed per the TREP/PWP may exhibit ephemeral wetland and/or habitat characteristics over time, however it should be recognized that their primary function is for water quality filtration and treatment, flow control, and infiltration. As such, maintenance within these devices on a regular basis is expected and necessary to maintain their intended function, and is therefore allowed pursuant to this TREP/PWP. These devices are not to be treated as wetlands including for purposes of Implementation Measures 5.4.10 and 5.4.11.

Implementation Measure 5.4.10: An evaluation of the development area should be conducted for all improvements proposed in areas where wetlands may occur and should be submitted with the project specific NOID. The evaluation should include any changed site conditions that could affect wetland values protected by the TREP/PWP. A wetland evaluation should be completed in the proposed development area (i.e., the proposed development footprint and a surrounding 100-foot buffer area) pursuant to the wetland definition provided by Coastal Act 30121. Should wetland areas be identified within 100 feet of the development area during this process that are not already considered in the TREP/PWP, all wetland resource protection measures included in this TREP/PWP should be applied to the newly identified wetland area.. For any newly identified wetland area, an appropriate buffer/setback should be established, based upon site-specific conditions in accordance with Implementation Measure 5.4.11.

Implementation Measure 5.4.11: Buffers/setbacks for wetlands delineated at the time of TREP/PWP certification should be maintained as identified on Figure 5.4-2, unless reduced wetland buffers/setbacks are authorized pursuant to the NOID and/or Public Works Plan Amendment procedures contained in Chapter 6. For any new wetlands identified and delineated pursuant to Implementation Measure 5.4.10, development should be sited and designed to minimize wetland impacts, and appropriate buffers/setbacks provided based on a site-specific biological evaluation confirming the buffers/setbacks are adequate to avoid or minimize significant adverse impacts to wetland resources.

Implementation Measure 5.4.12: Where applicable, NOID submittals for specific project implementation should include an evaluation of impacts and benefits of removal of existing earthen fill from lagoon crossing structures, and of design options for new structures that reduce the amount of fill required in lagoons. Opportunities to improve coastal hydrology/hydraulics in tidal lagoons utilizing specific construction methods or facility designs, including the replacement of existing embankments within the lagoons with a series of bridge structures should be evaluated in conjunction with the feasibility, costs versus benefits, and effectiveness of reducing the amount of existing fill and improving hydrologic conditions by replacing structures.

Implementation Measure 5.4.13: Debris from the replacement of old bridges or construction of new bridges should be contained, such that debris is not released into lagoons, rivers or other waterbodies.

Implementation Measure 5.4.14: Appropriate BMPs should be implemented to minimize erosion and sedimentation to lagoons, rivers or other waterbodies.

Implementation Measure 5.4.15: Bioswales and detention basins should be placed throughout the project limits to filter runoff prior to reaching wetlands and other waters of the U.S., as space is available and where feasible based on site specific conditions.

Implementation Measure 5.4.16: Fueling of construction equipment should 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.

Implementation Measure 5.4.17: NOID submittals for wetland habitat creation, restoration and/or enhancement plans proposed in accordance with the Resource Enhancement Program detailed in Chapter 6 should include the following information and materials:

- Clearly stated objectives and goals for the wetland habitat creation, restoration and/or enhancement plans.
- Baseline data regarding the biological, physical, and chemical criteria for the creation, restoration and/or enhancement site.
- Documentation demonstrating the proposed wetland creation, restoration and/or enhancement project will continue to function as a viable wetland over the long-term.
- Technical detail in the project design including, at a minimum, an engineered grading plan and water control structures, methods for conserving or stockpiling topsoil, a planting program including removal of exotic species, a list of all species to be planted, sources of seeds and/or plants, timing of planting, plant locations and elevations on the mitigation site base map, and maintenance techniques.
- Documentation of performance standards, which provide a mechanism for making adjustments to the creation, restoration and/or enhancement site when it is determined through monitoring the enhancement or restoration techniques are not successful.
- Description of management and maintenance requirements, and provisions for remediation should the need arise.
- An implementation plan that demonstrates there is sufficient scientific expertise, supervision, and financial resources to carry out the proposed activities.
- A monitoring program to be implemented for five years after completion of the wetland creation, restoration and/or enhancement project with appropriate provisions to ensure the project has successfully met the stated goals and objectives.

5.4.4 Coastal Act Consistency

Coastal Act Section 30230

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.

Coastal Act Section 30231

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

Coastal Act Section 30233

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) 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.

(5) 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.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the l9 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where such improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Coastal Act Section 30236

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.

5.4.4.1 TREP/PWP Wetland Fill and Allowable Uses

Section 30233 of the Coastal Act limits the type of development and uses that are permitted to occur in coastal wetlands and, where permitted, requires that such development and uses be the least environmentally damaging, feasible alternative, and that feasible mitigation measures be provided to minimize adverse environmental effects. Coastal Act Section 30108 defines “feasible” as “capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.”

Proposed rail improvements would result in permanent impacts to between 26–30 acres of coastal wetlands, and impacts to wetland areas from propose highway improvements could consist of up to approximately 20 acres of temporary impacts, and up to 25–33.5 acres of permanent impacts. As the existing location of the NCC rail and highway facilities requires that some TREP/PWP improvements would occur in areas containing wetlands, it is infeasible to avoid all impacts to wetland areas during construction of the proposed improvements. As discussed above, the TREP/PWP improvements appear to be incidental public services; therefore, fill of wetlands would be allowed for the TREP/PWP improvements under Section 30233(a)(4) as long as there is no feasible, less environmentally

damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects.

Nonetheless, it is possible a different conclusion could be reached and the TREP/PWP improvements would not be considered incidental public services. As such, Section 5.10 evaluates the TREP/PWP improvements under the Coastal Act conflict-resolution provision (Section 30007.5).The conflict resolution analysis concludes that denying or modifying the TREP/PWP to eliminate wetland impacts would conflict with policies in Chapter 3 of the Coastal Act, and that even if the TREP/PWP conflicts with the Coastal Act's wetlands provisions, approval of the TREP/PWP is on balance is the most protective of significant coastal resources.

Evaluation of Feasible Alternatives

Section 5.10, Coastal Act Policy Conflict Resolution, includes a programmatic analysis of project alternatives analyzed to address mobility deficiencies and enhance multi-modal access throughout the corridor. Based on this analysis, the program of rail and highway improvements included in the TREP/PWP provides the least environmentally damaging, feasible project alternative to avoid or reduce impacts to coastal resources, while implementing Coastal Act policies that mandate protection of coastal resources by 1) minimizing energy consumption and vehicle miles traveled, and protecting air quality (Section 30253); 2) concentrating new development in or adjacent to areas able to accommodate growth (Section 30250); 3) providing and enhancing transit and non-automobile circulation, and assuring that the potential for public transit is provided for high intensity uses (Section 30252); and 4) protecting and enhancing public access to recreational resources in the coastal zone (Sections 30210, 30211, 30212, 30212.5, 30213, 30214, 30223, 30252, and 30254). The proposed TREP/PWP improvements consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to the existing rail and highway facilities are generally expansions or reconfigurations of existing facilities or, where new rail alignment tunnel options are being considered, would occur primarily below ground; therefore, the proposed TREP/PWP rail and highway improvements would involve limited expansion or encroachment into wetlands and other sensitive habitat areas that might otherwise occur if new transportation infrastructure were to be constructed as separate and distinct facilities from the existing rail and highway ROW to address mobility deficiencies and enhance multi-modal access throughout the corridor.

In addition to the programmatic analysis of project alternatives discussed above and included in Section 5.10, a detailed, design-level alternatives analysis for proposed TREP/PWP rail and highway improvements that affect wetlands is required to be conducted consistent with the Coastal Act Policy Conflict Resolution process to identify the least environmentally damaging alternative. Feasible project alternatives for LOSSAN rail improvements potentially affecting wetlands would be determined in project-level analyses and during phased federal consistency review, as applicable. The project alternative analysis for highway improvements potentially affecting wetlands is included in the *I-5 NCC Project Draft EIR/EIS*. A public review period will be conducted and consistent with applicable laws, the selection of a preferred alternative is expected to follow, which would be incorporated and further evaluated as part of the TREP/PWP process.

Feasible Mitigation Measures

Section 5.4.5 and the following consistency analysis sections for proposed rail and highway improvements demonstrate that feasible mitigation measures have been included in the TREP/PWP as project design features, design/development strategies for rail improvements, and/or policies and

implementation measures for highway improvements to minimize significant adverse environmental impacts.

5.4.4.2 LOSSAN Rail Corridor Consistency Analysis

Rail improvement design and development strategies would ensure that marine resources are maintained, enhanced, and where feasible, restored. Project-level analysis for potential water quality and marine habitat impacts of rail improvements would be conducted and subject to review during subsequent project-specific environmental and federal consistency review, as applicable, to assess and identify all potential permanent or temporary impacts to water quality and marine habitats and appropriate mitigation measures to ensure project consistency with Coastal Act policies 30230, 30231 and 30233. Project level analysis would include field surveys of potential surface water quality impacts; identification of potentially substantial alteration of in-water flow and drainage patterns (i.e., increased storm water runoff, increased groundwater discharge or reduction of groundwater recharge); determination of acceptable designs and construction techniques that would minimize adverse impacts of increased sedimentation; analysis of additional impervious surface and increase in surface runoff for different alignment options; impacts and benefits of removal of existing earthen fill from lagoon crossing structures; and new structure design options to improve coastal hydrology and hydrodynamics in tidal lagoons. In addition, potential minimization and mitigation measures, as well as project construction schedules, would be developed in consultation with resource agencies and lagoon restoration efforts.

Project-level review would also include Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permits, where applicable. Under the requirements of the NPDES California Department of Transportation Statewide Storm Water Permit and the Construction General Permit, a SWPPP would be developed during construction and implemented to reduce pollutants in storm water discharges and the potential for erosion and sedimentation. The SWPPP would include BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements, stormwater management, and channel dewatering for all stream and lagoon crossings. Additionally, measures to manage the overall amount and quality of stormwater runoff to regional systems would be detailed as part of the SWPPP.

In addition, the design and development strategies would ensure the feasibility and potential benefits and impacts of rail improvements to wetland resources would be determined in project-level analyses; however, as part of the conceptual design at the program level, the lead agencies have proposed, at a minimum, to maintain or reduced, where feasible the in-water footprint of the existing rail corridor bridges where improvements would cross coastal waterbodies. As such, the footprint of existing bridges across the corridor's waterbodies would not be increased under the proposed rail improvements plan.

Pursuant to Section 30236 of the Coastal Act, certain types of channelization projects and other developments resulting in the alteration of rivers and streams may be allowed when necessary for a required flood control project, 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 and only when such development incorporates the best mitigation measures feasible. The proposed rail improvements would not include new pipes, box culverts, or other structures that would result in significant alteration of natural stream courses. TREP/PWP improvements (bridges) that would occupy areas within floodways in the corridor potentially resulting in alteration of rivers and streams are permitted pursuant to Section 30236, as the improvements are necessary to upgrade and protect existing structures for continued public safety. Improvements would not create an unreasonable, unnecessary, undesirable, or dangerous impediment to the flow of floodwaters, and would be designed

to minimize necessary stream alternations, and to provide new opportunities to improve stream flow and fish and wildlife habitat.

Furthermore, as discussed in Section 5.4.5 and per the proposed rail improvement design and development strategies, impacts to lagoon, riparian, or other isolated wetland habitats would be fully mitigated pursuant to the Resource Enhancement Program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration and enhancement.

5.4.4.3 I-5 Highway Corridor Consistency Analysis

TREP/PWP highway policies and implementation measures require that highway improvements incorporate measures to minimize impacts to coastal waters. The measures include provisions for site design and planning and incorporation of BMPs designed to control the volume, velocity, and pollutant load of stormwater leaving the developed area. Critical to the successful function of post-construction BMPs in removing pollutants in stormwater to the maximum extent practicable is the application of appropriate design standards for sizing BMPs. The majority of runoff from proposed improvements would be generated from expanded highway facilities. Utilizing standard Caltrans treatment methods, it is anticipated that 50–60% of runoff from the highway would be treated prior to discharge, based upon preliminary modeling and previous project experience, which would be a substantial improvement over existing conditions. Additional runoff treatment opportunities from highway facilities will be evaluated upon selection of a Preferred Alternative, which will be further analyzed as part of the *I-5 NCC Project EIR/EIS* and TREP/PWP process.

The TREP/PWP improvement program would upgrade I-5 corridor facilities with current treatment BMPs to the maximum extent practicable. The program would include analyzing the entirety of the corridor from a water quality perspective in relation to the impaired receiving water bodies in the NCC and provide for a more comprehensive approach to analyze the hydrology of the entire project area for purposes of improving water quality. Treatment BMPs would consist of permanent measures to improve storm water quality during the operation of the facility after completing construction. Approved treatment BMPs could include biofiltration systems, infiltration devices, detention devices, dry weather flow diversions, gross solid removal devices, media filters, and wet basins.

Proposed highway policies and implementation measures include operational and construction BMPs that would be implemented for all maintenance and construction activities for highway facilities pursuant to the statewide SWMP and the provisions of the NPDES Permit. The highway policies and implementation measures require implementation of treatment BMPs determined to be technically and fiscally feasible for all highway facility improvements that would prevent or minimize long-term potential impacts from Caltrans facilities or activities. Where treatment BMPs could not incorporated due to infeasibility, vegetation would be maximized and every effort would be made to ensure the successful establishment of landscaping and erosion control throughout the project limits.

In addition, design pollution prevention BMPs would be implemented for all highway facility improvements to prevent downstream erosion, which would stabilize disturbed soil areas and maximize vegetated surfaces consistent with Caltrans' policies. Potential design pollution prevention measures include preservation of existing vegetation, concentrated flow conveyance systems, and slope/surface protection systems. Maintenance BMP preventative measures would be implemented for all highway facility improvements to ensure that maintenance activities are conducted in a manner that reduces the amount of pollutants discharged to surface waters via Caltrans' storm water drainage systems. The highway policies and implementation measures also requires maintenance BMPs to be implemented for the life of the facility in accordance with the *Storm Water Quality Handbook–Maintenance Staff Guide*, which includes litter removal, toxics control, street sweeping, and other approved measures.

In regards to potential construction impacts, construction BMPs would be implemented for all highway facility improvements that would reduce pollutants in storm water discharges and eliminate non-storm water discharges. Construction and phasing plans for highway improvements would preserve the existing vegetation outside the work areas, stabilize slopes with vegetative cover, and keep the total paved area to a practical minimal. Soil disturbance during the construction phase will incorporate temporary BMPs in accordance with Construction General Permit and the Caltrans NPDES permit to minimize erosion and sediment transport. Permanent BMPs would be installed upon construction completion to maintain slope stability. Potential pollutants generated during construction phase activities, from stormwater and non-stormwater sources, would be addressed in the SWPPP as required by contract specification.

TREP/PWP policies also require submittal of construction phasing and staging plans with future project-specific NOIDs to ensure proposed construction activities do not significantly affect downstream site stability due to changes in the rate and volume of runoff, and sediment load potentially caused by modification of existing drainage patterns, or other potential hydraulic changes from waterbody encroachments, crossings or realignment. As such, the TREP/PWP includes a number of implementation measures utilizing a combination of erosion and sediment control BMPs to address both storm water and non-storm water discharges during construction activities.

The highway policies and implementation measures also require that options for coordinating rail and highway infrastructure construction plans in lagoon areas would be analyzed for potential benefits to lagoon systems and feasibility for rail and highway project implementation. In addition, pursuant to the proposed policies and implementation measures, an evaluation of impacts and benefits of removal of existing earthen fill from lagoon crossing structures, and of design options for new structures that reduce the amount of fill required in lagoons would be conducted. Opportunities to improve coastal hydrology/hydraulics in tidal lagoons utilizing specific construction methods or facility designs, including the replacement of existing embankments within the lagoons with a series of bridge structures, would be evaluated in conjunction with the feasibility, costs versus benefits, and effectiveness of reducing the amount of existing fill and improving hydrologic conditions by replacing structures.

Consistent with Section 30236 of the Coastal Act, the proposed highway improvements would not include new pipes, box culverts or other structures that would result in significant alteration of natural streams or drainages. TREP/PWP improvements that would occupy areas within floodways (bridges) in the corridor potentially resulting in alteration of rivers and streams are permitted pursuant to Section 30236 as the improvements are necessary to upgrade and protect existing structures for continued public safety. Improvements would not create an unreasonable, unnecessary, undesirable or dangerous impediment to the flow of floodwaters, would be designed to minimize necessary stream alternations, and to provide new opportunities to improve stream flow, fish and wildlife habitat.

Furthermore, as discussed in Section 5.4.5, and pursuant to the proposed highway policies and implementation measures, impacts to lagoon, riparian, or other isolated wetland habitats would be fully mitigated pursuant to the Resource Enhancement Program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration and enhancement.

5.4.4.4 Coastal Act Consistency Analysis Summary

Implementation of a corridor-wide resource enhancement program could restore watershed features once lost by construction of the transportation facilities with upgraded bridges and reduced development footprint in coastal water bodies, and could restore channelized and armored portions of inland waterways and the shoreline at Del Mar Bluffs, where determined feasible. Proposed TREP/PWP improvements would potentially restore water quality and tidal circulation of lagoons,

improve conveyance of stream flow and sediment transport from inland areas, facilitate passage of fish and other aquatic species, and restore natural shoreline processes thereby enhancing biological productivity of marine resources and water quality.

Benefits to water quality from the proposed rail improvements would also result from the reduction in VMT on area highways that may occur with increased and improved rail service, as fewer roadway pollutants would be present in the surface run-off from the roadways. Reduction in VMT with the implementation of the rail improvements, when combined with the proposed highway improvements that would specifically target improving water quality on I-5, would reduce and better treat stormwater runoff from area highways, resulting in a beneficial impact to water quality throughout the corridor.

Based on available project and environmental data and the policies and implementation measures included herein, the proposed TREP/PWP highway improvements would protect and enhance water quality and marine habitats, and therefore the TREP/PWP is consistent with Sections 30230, 30231 and 30236 of the Coastal Act.

The TREP/PWP improvements appear to be incidental public services. As such, fill of wetlands would be allowed for the TREP/PWP improvements under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. As demonstrated in the section and discussed in more detail in Section 5.10, there is no feasible, less environmentally damaging alternative that would address the mobility and coastal policy concerns of the corridor and avoid impacts to wetlands, and feasible mitigation measures have been provided to minimize adverse environmental effects.

Nonetheless, it is possible a different conclusion could be reached and that the TREP/PWP improvements would not be considered to be incidental public services. Section 5.10 evaluates the TREP/PWP improvements under the Coastal Acts conflict-resolution provision (Section 30007.5). It concludes that denying or modifying the TREP/PWP would conflict with policies in Chapter 3 of the Coastal Act, and that even if the TREP/PWP conflicts with the Coastal Act's wetlands provisions, approving the TREP/PWP on balance is the most protective of significant coastal resources.

5.4.5 Local Coastal Program Consistency

Appendix A includes a Local Coastal Program (LCP) Policy Consistency Analysis matrix that evaluates TREP/PWP consistency with the policies of each LCP area that would be affected by the proposed highway corridor improvements, and by those rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and, thus, fall under the exclusive jurisdiction of the Surface Transportation Board (STB), the LCP policy consistency analysis may provide guidance or background information for analyzing rail project consistency with Sections 30230, 30231, 30233, and 30236 of the Coastal Act, as appropriate and applicable (see Chapter 1 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). The corridor's LCP water quality, wetland, and stream channelization policies are summarized with brief city-specific consistency analyses below, which also integrate and supplement the above consistency analysis for Sections 30230, 30231, 30233, and 30236 of the Coastal Act. A complete list of LCP policies and corresponding consistency analysis is included in the LCP Policy Consistency Analysis matrix for each city (Appendix A).

5.4.5.1 Local Coastal Program Consistency Analysis Summary

Most of the corridor LCPs include policies that mirror, in part, the requirements of Sections 30230, 30231, 30233, and 30236 of the Coastal Act; however, the LCPs also include a variety of additional, detailed, and city-specific policies and development standards that address potential impacts associated with water quality, wetland resources and stream channelization. It should be noted that many of the City's LCP policies that address marine resources and water quality concerns are also relied upon to address natural hazards through grading, drainage, and stormwater runoff controls. As such, LCP policies that focus on grading, drainage, and stormwater runoff measures are also addressed in more detail in Section 5.8.

Common policy requirements for protection of marine resources within the NCC LCPs include:

- Limiting construction in floodplains and shoreline protection devices pursuant to Sections 30235 and 30236 of the Coastal Act;
- Avoiding grading and development on steep slopes, where feasible, and limiting the duration and timing of grading activities;
- Implementing drainage and stormwater runoff control plans to minimize site erosion;
- Minimizing grading and removal of vegetation;
- Revegetating graded and disturbed areas with native, drought-tolerant plant species to minimize erosions;
- Implementing drainage and stormwater runoff control plans to minimize site erosion and sedimentation, and to retain and treat stormwater runoff;
- Prohibiting fill of wetlands pursuant to Section 30233 of the Coastal Act;
- Prohibiting impacts to riparian habitat pursuant to the environmentally sensitive habitat area protection policies of the Coastal Act (Section 30240); and
- Imposing setback (buffer) requirements from wetlands, streams and the shoreline

These LCP policies are generally applied on a city-wide basis in the respective jurisdictions, but in some instances are also applied to specifically address the many significant coastal waterbodies that are identified by the LCP within each city, including:

- **City of San Diego**
  - Los Peñasquitos Lagoon
  - San Dieguito Lagoon
  - San Dieguito River
  - Los Peñasquitos Creek
  - Carroll Canyon Creek
  - Soledad Canyon
  - Carmel Creek
  - Crest Canyon
- **City of Del Mar**
  - Los Peñasquitos Lagoon
  - San Dieguito Lagoon
  - San Dieguito River

- Crest Canyon
- Del Mar Canyon

- **City of Encinitas**
  - San Elijo Lagoon
  - Batiquitos Lagoon
  - Encinitas Creek
  - Escondido Creek
  - El Camino Real Creek
- **City of Carlsbad**
  - Batiquitos Lagoon
  - Buena Vista Lagoon
  - Agua Hedionda Lagoon
  - Encinas Creek
  - San Marcos Creek
  - Encinitas Creek
- **City of Oceanside**
  - Buena Vista Lagoon
  - San Luis Rey River
  - Loma Alta Creek

As discussed in detail in the Coastal Act policy consistency analysis above, TREP/PWP improvements could restore water quality and tidal circulation of lagoons, improve stream flow and sediment transport from inland areas, facilitate passage of fish and other aquatic species, and restore natural shoreline processes, thereby enhancing biological productivity of marine resources and water quality. Benefits to water quality from the proposed rail improvements could result also from the reduction in VMT on area highways that could occur with increased and improved rail service as fewer roadway pollutants would be present in the surface run-off from the roadways. Any reduction in VMT with the implementation of the rail Improvements, in conjunction with the proposed highway improvements that would specifically target improving water quality on I-5, would reduce and better treat the pollutant burden in stormwater runoff from area highways resulting in a beneficial impact to water quality throughout the corridor. TREP/PWP improvements would not result in channelization of coastal streams that would be inconsistent with Section 30236 of the Coastal Act. As such, the TREP/PWP is consistent with applicable LCP policies addressing marine resources and channelization of streams and therefore these policies would not need to be amended for implementation of the proposed transportation facility improvements.

In addition, all of the corridor LCPs include specific requirements for addressing stormwater runoff to ensure water quality is protected and, where feasible, is enhanced and restored, although the specific requirements vary between the individual LCPs, and/or within individual LCPs where the San Diego and Carlsbad LCPs include a number of specific LCP community plans or segments. The corridor LCPs collectively include the following range of policies requirements that address stormwater quality:

- Ensure zero increase in runoff by preparing a storm water management plan.

- If a project site is on or adjacent to sloping lands, drainage systems should be designed so that the peak rate of runoff for the 10-year-frequency storm event will not exceed the rate under undeveloped conditions.
- Assure that there will be no increase in the peak runoff rate from the fully developed site, and neither significantly increase nor contributes to downstream bank erosion and sedimentation.
- Increases in post-construction runoff and sediment above the 10-year storm frequency reconstruction condition, will be mitigated.
- No increase in the peak runoff rate from the fully developed site over the greatest discharge that would occur from the existing undeveloped site as a result of the intensity of rainfall expected during a 6-hour period once every 10 years.
- Assure no increase in peak runoff rate from the developed site over the greatest discharge expected from the existing undeveloped site as a result of a 10-year frequency storm.

Although the proposed TREP/PWP improvements have been sited and designed to minimize impacts to water quality, and would include a number of mitigation measures to protect and, where feasible, enhance and restore coastal water quality, project details for highway improvements are unavailable to conclude that the proposed improvements could be implemented consistent with the specific corridor LCP policy requirements that address stormwater quality. As such, LCP policy requirements for San Diego and Carlsbad requiring specific stormwater treatment standards for new development present potential policy conflicts that may require amendment to ensure consistency of the TREP/PWP improvements with the certified LCPs. These potential policy conflicts are identified for each affected LCP in Appendix A.

The proposed TREP/PWP improvements all appear to be incidental public services. As such, fill of wetlands would be allowed for the TREP/PWP improvements under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. The TREP/PWP meets this standard and is thus consistent with the local jurisdictions' LCPs which mirror Coastal Act Section 30233. Nonetheless, it is possible a different conclusion could be reached and the TREP/PWP improvements would not be considered to be incidental public services. As such, SANDAG and Caltrans may seek amendments to the LCPs of San Diego, Encinitas, Carlsbad, and Oceanside to allow for conflict resolution under Section 30007.5 of the Coastal Act. Section 5.10 evaluates the TREP/PWP improvements under the Coastal Act's conflict-resolution provision (Section 30007.5). The conflict resolution analysis concludes that denying or modifying the TREP/PWP to avoid the wetland fill impacts discussed in this section would conflict with several other Chapter 3 policies of the Coastal Act should it be concluded that the TREP/PWP conflicts with the Coastal Act's wetlands provisions, approving the TREP/PWP on balance is the most protective of significant coastal resources.

Further, all of the corridor LCPs include specific policies that require buffers from wetland and riparian habitat areas, and mitigation requirements where impacts to wetland and riparian areas are permitted. As with LCP policies addressing stormwater quality, the specific policy requirements for buffers and mitigation vary between the individual LCPs, and/or within individual LCPs where the San Diego and Carlsbad LCPs include a number of specific LCP community plans or segments. The corridor LCPs collectively include a range of policy requirements that address wetland and riparian buffers and mitigation, some of which include buffer requirements without the option to adjust the buffers, and others that provide for minimum buffer requirements but allow for adjustment if certain criteria are met. Buffer areas for wetland habitats in the certified cities are generally required to be 100 feet, and pursuant to some policies, may be reduced to 50 feet or less if it is demonstrated that a smaller buffer

would protect the resources of the wetland area based on site-specific information. LCP policies generally require riparian habitat buffers to be a minimum of 100–50 feet. Corridor LCP mitigation requirements generally include a 4:1 mitigation ratio for impacts to saltwater or freshwater wetland or marsh impacts, and a 3:1 mitigation ratio for riparian impacts, with some variation between the LCPs.

The existing location of the transportation facilities requires that the proposed projects occur in areas within and adjacent to the wetlands, riparian, and sensitive habitats; therefore, the project would not provide the minimum buffer requirements articulated in the corridor LCPs. In addition, because the proposed Resource Enhancement Program is intended to significantly enhance water quality and marine resources in the corridor by implementing a combination of traditional and non-traditional measures to mitigate coastal resource impacts and to enhance and restore resources beyond standard mitigation requirements, it is unlikely that the TREP/PWP improvements would meet the traditional mitigation ratio requirements for wetland and riparian habitat areas included in the corridor LCPs. As such, these LCP policy requirements for San Diego, Encinitas, Carlsbad, and Oceanside present potential policy conflicts that would require amendment to ensure consistency of the TREP/PWP improvements with the certified LCPs. These potential policy conflicts are identified for each affected LCP in Appendix A.

5.5 ENVIRONMENTALLY SENSITIVE HABITAT AREAS AND SPECIAL-STATUS SPECIES

5.5.1 Environmentally Sensitive Habitat Areas in the Corridor

The NCC is located in a region known to contain several environmentally sensitive habitat areas (ESHAs). ESHAs most commonly observed within the corridor include coastal lagoons, coastal and inland waterways, smaller drainages supporting wetland/riparian habitats, isolated riparian/wetland habitats and upland habitats, some of which have the potential to support sensitive plant and animal species and to provide critical habitat for special-status species and wildlife corridors. Figures 5.5-1A–J provide an overview of existing and potential sensitive resources in the corridor based on the corridor setting evaluated and documented for purposes of preparing the TREP/PWP. These figures illustrate the location of potential ESHA areas, critical habitat and special-status species known to potentially occur and/or observed in the corridor. A comprehensive list of special-status species known to potentially occur and/or observed within the rail and highway improvement study areas and their expected location is provided at the end of this section. As the corridor's natural resources are subject to change throughout implementation of the TREP/PWP, the environmentally sensitive habitat area mapping included in Figures 5.5-1A–J and 5.5-2A–J provide the baseline from which to evaluate potential project impacts to known (observed) and potential habitat areas and special-status plant and wildlife species, and to determine when the provisions of the this section apply to future project implementation pursuant to the Notice of Impending Development (NOID) procedures. Due to the use of the lagoons and associated upland habitats within the corridor by numerous bird species that are considered migratory, not all sightings were mapped; however, many species of herons, egrets, and raptors were commonly observed in the study area and are included in the special-status species list at the end of this section. In addition to the sensitive resources discussed in this section, Section 5.4 addresses ESHAs associated with the corridor's lagoon, rivers, streams, smaller drainages, as well as isolated wetlands and riparian habitat areas.

5.5.1.1 LOSSAN Rail Corridor Resources

The study area for biological resources for the LOSSAN rail improvements was defined in the *LOSSAN Final Program EIR/EIS* as 1,000 feet on each side of the centerline of the proposed alignment options (including station locations) in urban areas, and as 0.50 miles on each side of the centerline in sensitive areas, including the lagoons. The *LOSSAN Final Program EIR/EIS* is a program-level analysis of natural communities and species identified or potentially occurring within the study area, and of potential impacts to these resources that could result from proposed rail improvements.

Native Upland Habitat

Six native upland habitat types are found within the LOSSAN rail corridor, which, based on site-specific evaluation may be found to constitute ESHA as defined by Section 30107.5 of the Coastal Act. These habitats include coastal sage scrub, southern maritime chaparral, Torrey pine forest, oak woodland, southern dune scrub, and southern foredunes.

Special Status Plants

According to the *LOSSAN Final Program EIR/EIS* and observation data provided by SANDAG, there are 25 special-status plant species potentially located within the LOSSAN rail corridor. 18 of the plant species are listed as Federal and/or State Endangered and/or California Native Plant Society (CNPS) List 1B. Per CNPS, the plants of List 1B are rare, threatened or endangered in California and elsewhere, and in addition, meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) and are eligible for state listing. There are five plant species listed as Federal and/or State Endangered: the Del Mar Manzanita

(*Arctostaphylos glandulosa* ssp. *crassifolia*), the Orcutt's sunflower (*Chorizanthe orcuttiana*), the Short-leaved dudleya (*Dudleya brevifolia*), California orcutt grass (*Orcuttia californica*) and the San Diego button celery (*Eryngium aristulatum* var. *parishii*). The other seven special-status plant species are CNPS List 2 or 3 species.

Special Status Wildlife

According to the *LOSSAN Final Program EIR/EIS* and observation data provided by SANDAG, there are 39 special-status wildlife species potentially located within the LOSSAN rail corridor, 11 of which are listed as Federal and/or State Endangered including San Diego fairy shrimp (*Branchinecta sandiegonensis),* Southwestern willow flycatcher (*Empidonax traillii extrimus),* Tidewater Goby (*Eucyclogobius newberryi),* Belding's savannah sparrow (*Passerculus sandwichensis beldingi),* California brown-pelican (*Pelecanus occidentalis ssp.californicus),* Pacific pocket mouse (*Perognathus longimembris pacificus),* Light-footed clapper rail (*Rallus longirostris levipes),* California least tern (*Sterna antillarum browni),* Riverside fairy shrimp (*Streptocephalus woottoni),* Least Bell's vireo (*Vireo bellii pusillus),* and Peregrine falcon (*Falco peregrinus).* A comprehensive list of special-status wildlife species known to potentially occur and/or observed within the rail improvement study area and their expected location is provided at the end of this section.

Wildlife Corridors. Large open areas, lagoons and surrounding park or reserve areas, and riparian areas in undeveloped areas are considered potential wildlife movement corridors in the LOSSAN region. Additionally, smaller creeks and areas of disconnected habitat may provide connectivity by acting as stepping stones for the regional movement of some avian species, or may provide resting areas for migratory species. Potential wildlife movement/migration corridors may include San Luis Rey River, Buena Vista Lagoon, Aqua Hedionda Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito River and Lagoon, Los Peñasquitos Lagoon, Peñasquitos Creek and Canyon. Smaller creeks and linear areas of narrow natural or semi-natural habitat may also function as a wildlife corridor, and would be evaluated at the project level.

Critical Habitat. Designated critical habitat, as defined by the USFWS, may potentially occur within the study area for coastal California gnatcatcher, least Bell's vireo, tidewater goby, and San Diego fairy shrimp. USFWS data indicate that designated critical habitat for the tidewater goby occurs in the corridor in the City of Oceanside.

Though not specifically addressed in the *LOSSAN Final Program EIR/EIS*, but based on data presented in the *I-5 NCC Project Draft EIR/EIS* (June 2010) (provided below), Essential Fish Habitat (EFH) could occur within the rail corridor in San Dieguito, Batiquitos, and Agua Hedionda and San Elijo Lagoons.

5.5.1.2 I-5 Highway Corridor Resources

Numerous studies have been conducted and reviewed in preparing the *I-5 NCC Project Draft EIR/EIS,* including the I-5 NCC project Natural Environment Study (NES) (June 2008); the Manchester Avenue/Interstate 5 Interchange Project NES Report (January 2004); I-5 Widening Project Pacific Pocket Mouse Habitat Analysis and Trapping Program, San Diego County, California (June 2003); and the I-5 Lagoons Marine Resource Investigation (June 2006).

Native Upland Habitat Areas

The following seven natural upland habitat types are found within the I-5 NCC and, based on site-specific evaluation may be found to constitute ESHA as defined by Section 30107.5 of the Coastal Act:

- Coastal sage scrub (CSS) occurs on cut and fill slopes primarily in the southern half of the study area around most of the lagoons and rivers. CSS within the study area is generally dominated by drought-deciduous species such as California sagebrush (Artemisia californica), flat-top buckwheat (Eriogonum fasciculatum var. fasciculatum), and California sunflower (Encelia californica) with scattered evergreen shrubs including lemonadeberry (Rhus integrifolia), and laurel sumac (Malosma laurina). The understory is diverse and includes a rich variety of annual forbs, and both annual and perennial grasses. CSS habitat has the potential in some areas to support a variety of rare plant and animal species (e.g., coastal California gnatcatcher) and is the current focus of conservation efforts by the State of California through Natural Community Conservation Planning (NCCP), which includes, in San Diego County, the Multiple Species Conservation Program (MSCP) and Multiple Habitat Conservation Plan (MHCP). The disturbed form of this habitat has less overall cover and within the study area has the same dominant species listed above with non-native annual grasses, and non-native broadleaf species such as Russian thistle (*Salsola tragus*), acacia (*Acacia* sp.), mustard (*Brassica* sp.), and horseweed (*Conyza canadensis*).
- Baccharis scrub is a form of sage scrub dominated by coyote brush (*Baccharis pilularis*). This habitat is found in low-lying areas, often adjacent to drainages. This community is found adjacent to the drainage north of Genesee Avenue. Disturbed Baccharis scrub is also found along this drainage and is dominated by coyote brush and invasive, non-native pampas grass (*Cortaderia* sp.) above the channel at the southern end of this drainage.
- Maritime Succulent Scrub occurs on dry, south-facing slopes and coastal bluffs from Torrey Pines to El Rosario, Baja California. Maritime succulent scrub is dominated by a combination of coastal sage scrub dominants mixed with succulents and cacti and some endemic species (e.g., Del Mar manzanita). Typical species found in this community include California sagebrush, Shaw's agave (*Agave shawii*), California sunflower, coast barrel cactus (*Ferocactus viridescens*), coastal prickly pear (*Opuntia littoralis*), and coastal cholla (*Cylindropuntia prolifera*). Maritime succulent scrub occurs primarily on the west side of I-5 near Batiquitos Lagoon. The slopes are dominated by California sagebrush, coastal cholla, coast barrel cactus, fishhook cactus (*Mammillaria dioica*), and California sunflower.
- Coastal bluff scrub is a plant community made up primarily of low, prostrate plants that are wind pruned by sea breezes. Dominant plants in this community are primarily woody and/or succulent. Species commonly found in this community include sea dahlia (*Coreopsis maritima*), live forevers (*Dudley*a spp.), lemonadeberry, and prickly pear. Coastal bluff scrub occurs in a few locations on the slopes adjacent to I-5 north of San Elijo Lagoon.
- Southern maritime chaparral is dominated by wart-stemmed ceanothus (*Ceanothus verrucosus*) and thick-leave Eastwood's manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*). Other species found in this community include: chamise (*Adenostoma fasciculata*), spicebush (*Cneordium dumosum*), summer holly (*Comarostaphylos diversifolia*), sea dahlia (*Coreopsis maritima*), Del Mar sand aster (*Lessingia filaginifoli* var. *filaginifolia*), toyon, Torrey pine (*Pinus torreyana*), Nuttall's scrub oak (*Quercus dumosa*), and laurel sumac. Elements of Diegan CSS may be interspersed within this community. Southern maritime chaparral occurs in small patches within the study area. It mostly occurs outside of Caltrans ROW. Its distribution within the project limits is patchy, it is found on the northbound and southbound freeway slopes at Del Mar Heights Road, on some areas outside the ROW on the southbound slopes south of San Elijo Lagoon, and on some smaller patches on the northbound slopes north of Manchester Avenue along northbound I-5. Some areas of southern maritime chaparral are disturbed and have large openings that are bare or vegetated with non-native species. Many of the disturbed areas occur along trails or near development. Non-native species found in disturbed southern maritime chaparral include African fountain grass

(*Pennisetum setaceum*), Australian saltbush (*Atriplex semibaccata*), crystalline iceplant (*Mesembryanthemum* spp.), and ice plant (*Carpobrotus edulis*).

- Coastal sage – chaparral scrub is a mixture of the dominant species in coastal sage scrub and chaparral communities. Dominant plant species observed include chamise, coastal sagebrush, lilac (*Ceanothus* spp.), black sage, and poison oak (*Toxicodendron diversilobum*). Coastal sage – chaparral occurs on a slope east of Marine View Avenue and south of Loma Santa Fe exit and east of I-5.
- Coast live oak woodland consists primarily of coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus englemannii*) with several associated understory species including poison oak, skunk brush (*Rhus trilobata*), scrub oak, and toyon. The herbaceous layer consists of western ragweed (*Ambrosia psilostachya*), Douglas mugwort (*Artemisia douglasiana*), foxtail chess (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*) and slender wild oat (*Avena barbata*). Coast live oak woodland only occurs on the slopes above Jefferson Street south of Buena Vista Lagoon. The habitat comprises coast live oaks with non-native grasses in the understory.

Non-Native Upland Habitat Areas

The following four non-native upland habitat types are found within the I-5 NCC and are not typically considered ESHA as defined by Section 30107.5 of the Coastal Act, unless site-specific evaluation finds that these non-native habitats support rare or especially valuable plant or animal species:

- Native grassland in southern California is characterized by a moderate cover of native bunchgrasses with native forbs and usually a smaller component of non-native grasses and broadleaf species. Native grassland in the study area is dominated by purple needlegrass (*Nassella pulchra*) with giant wild rye (*Leymus condensatus*) and blue wild rye *(Elymus glaucus*), with non-native grasses and forbs within the community. Native grassland occurs on both the northbound and southbound slopes of I-5 north of Genesee Avenue.
- Non-native grassland consists of dense-to-sparse cover of non-native annual grasses, often associated with species of showy-flowered, native annual forbs, especially in years of high rainfall. This vegetation community is a disturbance-related community most often found in old fields or openings in native scrub habitats that occur on fine-textured, usually clay soils. These soils are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. Typical grasses found within the study area include wild oat (*Avena* sp.), soft chess, African fountain grass, veldt grass (*Ehrharta calycina*), red brome, and ripgut grass. Invasive species such as fennel (*Foeniculum vulgare*) and mustard are often associated with this vegetative community as a lesser component. Non-native grassland occurs in various locations along the cut slopes throughout the corridor. Non-native grassland is often found where ornamental vegetation has been degraded or grasses such as African fountain grass were planted as ornamental vegetation.
- Non-native woodland is a community comprising non-native trees including Eucalyptus (*Eucalyptus* spp.), pine trees (*Pinus* spp.), pepper trees (*Schinus* spp.), and others. This community is dominated by trees and does not include areas with a few trees interspersed with other herbaceous and shrubby plants. This habitat is generally dominated with Eucalyptus groves along I-5. Non-native woodland is found on the fringes around the lagoons and in various areas throughout the corridor.
- Disturbed Habitat are any lands where agricultural practices, construction, or other land-clearing activities have altered the native vegetation; species composition and site conditions are not characteristic of the disturbed phase of one of the plant associations. Such habitat, which is dominated by non-native annuals and perennial broadleaf species, is typically found in vacant lots,

roadsides, construction staging areas, and abandoned fields. Typical species found in this community include mustards, filaree (*Erodium* spp.), Russian thistle, tumbleweed (*Amaranthus albus*), sweet fennel, horseweed, crown daisy (*Chysanthemum coronarium*), and often degraded broadleaf ornamental plants such as ice plant, acacia, and myoporum (*Myoporum laetum*).

Plants Species

Twenty-four sensitive plant species potentially occur within the I-5 NCC, including 12 species that are listed as Federal and/or State Endangered or Threatened and CNPS List 1B, and nine species that are listed as only CNPS List 1B. Of the 12 species, the San Diego thornmint (*Acanothomintha ilicifolia*), the Coastal dunes milk-vetch (*Astragalus tener* var. *titi*), the Orcutt's spineflower (*Chorizanthe orcuttiana*), the San Diego button-celery (*Eryngium aristulatum* var. *parishii*), the willowy monardella (*Monardella linoides* ssp. *viminea*), the California orcutt grass (*Orcuttia californica*), and the San Diego Mesa mint (*Pogogyne abramsii*) are both Federally Endangered and State Endangered. The San Diego button-celery (which is associated with clay bottom vernal pools) and the San Diego Mesa mint (which is restricted to vernal pools on mesa tops) are not expected to occur within the project area as there are no vernal pools within the study area. Two species, the Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) and the San Diego ambrosia (*Ambrosia pumilla*) are Federally Endangered. In the study area, approximately 70 Del Mar Manzanita plants were observed at the top of the slopes on both sides of I-5, just north of Del Mar Heights Road to Birmingham Drive. San Diego ambrosia was not observed during any surveys conducted for the I-5 project, and there are no locations recorded in the California Natural Diversity Database (CNDDB) within the study area. Two species, the Encinitas baccharis (*Baccharis vanessae*) and the thread-leaved brodiaea (*Brodiaea filifolia*) are Federally Threatened and State Endangered. Encinitas baccharis is endemic to San Diego County, occurring locally in chaparral along the coast from Encinitas to Mira Mesa, but was not observed within the project area. The thread-leaved brodiaea, which is found in coastal sage scrub, cismontane woodland, valley and foothill grasslands, and in clay soils in vernal pools, was not observed during surveys conducted for the project.

Eelgrass beds grow subtidally and are important habitats for aquatic species and have specific regulations concerning impacts and mitigation. Subtidal portions of the lagoons within the study area were surveyed in 2006 for current eelgrass and possible invasive algae (*Caulerpa taxifolia*) distributions for purposes of identifying potential impacts. Eelgrass was observed in Batiquitos and Agua Hedionda Lagoons.

Invasive Species. Several aggressive invasive species currently are found along the I-5 slopes and the areas within the wetland habitats. Invasive species found along the I-5 slopes include varying amounts of pampas grass, ice plant, African fountain grass, and annual species. Recently, African veldt grass and onion weed *(Asphodelus fistulosus)* have become increasing problems as they spread along the ROW. African veldt grass has become a dominant species on the cut slope of I-5, between Del Mar Heights Road and Birmingham Drive, and is also spreading into habitats around the lagoons.

Tamarisk, arundo, castor bean, and fennel are common invasive species within the wetland habitats within the corridor. There are groups working to control these species, particularly in the lagoons; however, they are persistent invasive species. Another non-native invasive species that has invaded aquatic systems is a toxic algae (*Caulerpa taxifolia*), which had a large infestation in Agua Hedionda Lagoon in 2000, and has since been eradicated. Although toxic algae is not currently present in Batiquitos Lagoon, the lagoon is considered "at-risk" due to its proximity to residential areas, the input of storm drains, and the presence of eelgrass.

Wildlife Species

The I-5 NCC study area has a diverse assemblage of wildlife species that use a wide variety of habitats. Many migratory birds use the lagoons as they travel along the Pacific Flyway, as well as resident species such as the light-footed clapper rail and the Belding Savannah sparrow. Many species of waterfowl, shorebirds, and marsh species can be found within lagoon habitats. Some of the more common species observed include great blue heron (*Ardea herodias*), great egret (*Casmerodius albus*), snowy egret (*Egretta thula*), willet (*Catoptrophorus semipalmatus*), red-winged blackbird (*Agelaius phoeniceus*), American coot (*Fulica americana*), northern pintail (*Anas acuta*), American widgeon (*Anas americana*), black-necked stilt (*Himantopus mexicanus*), and many others. Cliff swallows (*Hirundo pyrrhonota*), northern rough-winged swallows (*Stelgidopteryx serripennis*), and white-throated swifts (*Aeronautes saxatalis*) have also been observed nesting within or on several of the bridges, primarily over the lagoons. No sign of bats were observed at any of the lagoon bridges.

Several other bird species were observed around the margins of the lagoons in southern willow scrub, including the yellow warbler (*Dendroica petechia*), Nuttall's woodpecker (*Picoides nuttallii*), song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), black-headed grosbeak (*Pheucticus melanocephalus*), and lesser goldfinch (*Carduelis psaltria*). There is limited riparian habitat in and around the lagoons; however, several creeks and the San Luis Rey River support many of these species within the project study area.

Coastal sage scrub and other upland habitats support a diverse group of reptiles, birds, and mammals especially around the lagoons. Mammals that were commonly detected within the study area include striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), desert cottontail (*Sylvilagus audubonii*), and many small rodents. Reptiles observed during field surveys include the western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), southern Pacific rattlesnake (*Crotalus viridis*), and one San Diego horned lizard (*Phrynosoma coronatum blainvillei*). Commonly observed upland bird species include coastal California gnatcatcher, bushtit (*Psaltriparus minimus*), wrentit (*Chamaeafasciata*), house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus majusculus*), northern harrier (*Circus cyaneus*), osprey (*Pandion haliaetus*), California towhee (*Pipilo crissalis*), and Anna's hummingbird (*Calypte anna*).

There are nine threatened and endangered bird species potentially occurring within the highway project area. Two species, the light-footed clapper rail (*Rallus longirostris levipes*) and the California least tern (*Sterna antillarum browni*), are listed as Federally Endangered, State Endangered, and California Fully Protected. The light-footed clapper rail whose habitat requires salt marshes dominated by cordgrass, but can also be found in habitats dominated by cattail (*Typha* sp.) and sedges (*Scirpus* sp.). Light-footed clapper rails were detected within 152 m (500 feet) of I-5 in Buena Vista, San Elijo, and Batiquitos Lagoons, yet no clapper rails were observed in Los Peñasquitos Lagoon in the I-5 study area. The San Dieguito Ecological Reserve has a colony of California least tern managed by the California Department of Fish and Game; San Elijo and Batiquitos Lagoons have known nesting areas and California least terns were observed foraging in these two lagoons in 2003. The breeding areas for the California least tern are outside of the grading limits; however, some foraging habitat may be impacted during construction.

Three of the nine bird species, the Least Bell's vireo (*Vireo bellii pusillus*), the Southwestern willow flycatcher (*Empidonax trailli extimus*), and the California brown pelican (*Pelecanus occidentalis c*alifornicus), are listed as Federally Endangered and State Endangered. The Least Bell's vireo is

migratory and nests in willows as well as a variety of other shrub and tree species. Two vireo territories were detected in the willow woodland east of I-5 near the San Dieguito River and were over 130 m (426 feet) and 225 m (738 feet) from I-5; however, they were outside the main study area. Protocol surveys for least Bell's vireo along Moonlight Creek in Encinitas were negative in both 2003 and 2004. Least Bell's vireo were detected during California gnatcatcher protocol surveys in small patches of riparian habitat in Oceanside. The Southwestern willow flycatcher nesting is restricted to willow thickets in riparian woodland. This subspecies is found among trees or large shrubs throughout San Diego County. The local breeding population in San Diego County is now extremely small. Surveys for the southwestern willow flycatcher were completed in the riparian habitat in the San Luis Rey River, which is the only suitable habitat within the study area. Although one was heard vocalizing during a wetland survey, subsequent surveys did not detect the southwestern willow flycatcher again. It is likely that the bird detected was migrating through the area at the time, as the San Elijo Lagoon Conservancy has records of migrant southwestern willow flycatchers at San Elijo Lagoon outside the study area. The California brown pelican (*Pelecanus occidentalis c*alifornicus) prefers marine habitats along the Pacific, Atlantic and Gulf coasts in North America and also south to Central and South America. The species is usually found within 20 km (12 miles) of shore. California brown pelicans were observed foraging and resting within the lagoons within the study area.

Two of the nine species are listed as Federally Threatened and CDFG Species of Special Concern; this includes the Western snowy plover (*Charadrius alexandrinus nivosus*) and the Coastal California gnatcatcher (*Polioptila californica californica*). The Western snowy plover (*Charadrius alexandrinus nivosus*) forages on both the dry sand of the upper beach and along the wet sand at the beach-surf interface. The snowy plover is known to occur in some of the coastal lagoons; however, according to focused surveys conducted throughout the corridor, there is no nesting area within the project footprint.[1] Some foraging habitat for this species may be impacted by this project at Batiquitos and Agua Hedionda Lagoons. The Coastal California gnatcatcher, in San Diego County, occurs in coastal lowlands generally below 600 m (1,968 feet) and is a non-migratory obligate resident of coastal sage scrub. California gnatcatchers were generally found in the I-5 study area along the fill slopes and a few cut slopes adjacent to the San Dieguito, San Elijo Lagoon, and Batiquitos Lagoon, and in a few adjacent canyons with coastal sage scrub habitat.

The Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) is listed as State Endangered, and is a resident to coastal salt marshes. Belding savannah sparrows were found in San Dieguito, San Elijo, and Batiquitos Lagoons during the spring 2005 surveys within the I-5 study area, as well as the Buena Vista Lagoon during the CDFG surveys in 2005.[2] Additional surveys were completed at San Dieguito in 2006 that identified more Belding's savannah sparrows in the northeastern portion of the study area.[3] The white-tailed kite (*Elanus caeruleus*), a California Fully Protected (CFP) Species and State Species of Species Concern, was occasionally observed foraging over the study area, usually over the agricultural fields; however, no nest sites were observed or are known in the I-5 study area.

The Pacific pocket mouse (*Perognathus longimembris pacificus*) is the only rodent listed as a Federally Endangered and CDFG Species of Special Concern that potentially occurs within the highway project area. The Pacific pocket mouse is endemic to the southern California coast from Los Angeles County to the Mexico-San Diego border. The small rodent prefers fine-grain and sandy substrates in coastal sage scrub; however, in San Diego County they have also been found in open patches of ground surrounded by weeds. The highest-quality habitat was found near San Dieguito and San Elijo Lagoons

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1 *I-5 NCC Project Natural Environmental Study,* June 2008.
2 *I-5 NCC Project Natural Environmental Study,* June 2008.
3 Zembal et al. 2006, as cited in *I-5 NCC Project Natural Environmental Study,* June 2008.

in 2003, although no pocket mice were found via protocol live-trapping and are not expected within the project limits.[4]

There are two fish species potentially occurring within the project area listed as Federally Endangered and CDFG Species of Special Concern—the Tidewater Goby (*Eucyclogobius newberryi*) and the Southern Steelhead Trout – Southern Evolutionarily Significant Unit (ESU) (*Oncorhynchus mykiss*). The Tidewater Goby is endemic to coastal lagoons and lower stream reaches in brackish to fresh, slow moving to still, but not stagnant water. No tidewater gobies were observed during fisheries surveys in the I-5 study area at San Elijo, Batiquitos, and Agua Hedionda Lagoons; however, there is a potential for them to occur within Agua Hedionda Lagoon. Due to the tidal weir at Buena Vista Lagoon, the tidewater goby is not anticipated within this lagoon. Southern Steelhead Trout ESU are found in coastal drainages. In May 2007, a steelhead trout was reported by CDFG personnel in the lower San Luis Rey River. The mouth of the San Luis Rey River is currently obstructed by a series of culverts under the Pacific Street crossing; however, a project is currently underway to bridge Pacific Street over the San Luis Rey allowing for easier access by both steelhead trout and tidewater goby.

Wildlife Corridors. Wildlife corridors connect large patches of natural open space that allow for the immigration and emigration of wildlife. Such movement assures the continual sharing of genetic information that helps maintain genetic diversity and reduces the probability of extinction through random events. For animals with a larger home range, such as mule deer (*Odocoileus hemionus*), coyotes (*Canis latrans*), and mountain lions (*Felis concolor*), corridors provide a link between habitat patches increasing the area available for dispersal, foraging and breeding. For smaller animals, the corridor itself may provide the habitat needed to sustain viable populations. Within the study area, the lagoons and habitats surrounding the lagoons are considered important linkages for wildlife movement. During I-5 NCC surveys, mule deer and their signs were primarily observed west of I-5 near Genessee and along Carmel Creek leading to Peñasquitos Lagoon. Coyote scat was observed near all lagoons and in coastal sage scrub throughout the corridor. Although no mountain lion or bobcat scat or tracks were observed, they are known to occur in habitats around the lagoons. In addition to the lagoons, the San Luis Rey River is also a major wildlife corridor.

The MSCP names Peñasquitos Lagoon and San Dieguito Lagoon as key Biological Core and Linkage Areas, and they are identified in regional conservation plans as either preserved or an area targeted for conservation. I-5 itself is a barrier to wildlife movement; however, the existing bridges over the lagoons do provide limited crossings on the abutments.

Critical Habitat. Critical habitat for the least Bell's vireo, southwestern willow flycatcher, tidewater goby, and the California gnatcatcher occurs within the highway study area. Critical habitat for the least Bell's vireo within the study area occurs along the San Luis Rey River near the I-5/SR-76 interchange. Critical habitat for the tidewater goby within the study area occurs at Agua Hedionda Lagoon. Critical habitat for the California gnatcatcher occurs within coastal sage scrub around San Elijo Lagoon, Batiquitos Lagoon, Lawrence Canyon, and near the Center City Golf Course in Oceanside.

Essential Fish Habitat (EFH) is identified in the Magnuson-Stevens Fishery Conservation and Management Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." EFH has been identified for four groups of fish: Pacific salmon, Pacific groundfish, coastal pelagic species, and highly migratory species. The Pacific salmon group does not include steelhead, which are protected by the Endangered Species Act. The coastal pelagic species group is the only EFH group to occur within the study area, and includes northern anchovy (*Engraulis mordax*),

[4] URS 2003, as cited in *I-5 NCC Project Natural Environmental Study*, June 2008.

Pacific sardine (*Sardinops sagax*), Pacific mackerel (*Scomber japonicus*), and the jack mackerel (*Trachurus symmetricus*). Northern anchovy, Pacific sardine, and jack mackerel have a potential to occur in San Dieguito, Batiquitos, and Agua Hedionda Lagoons, and only Northern anchovy at San Elijo Lagoon. These species are most likely to occur in Batiquitos and Agua Hedionda Lagoons as these systems are continuously open to the ocean provide EFH.

5.5.2 TREP/PWP Concerns

Environmental documentation and analysis prepared for the TREP/PWP rail and highway corridor improvements indicate that ESHAs and special-status species are known to occur within the project improvement areas that could be affected by implementation of the proposed rail and highway improvements. In addition, environmental documentation demonstrates that many of the corridor's significant sensitive resources have experienced and will continue to experience varying degrees of ongoing degradation due to adjacent development and the existing transportation facilities addressed by the TREP/PWP.

5.5.2.1 Natural Resource Deficiencies

Chapter 3 identifies resource deficiencies in the corridor related to historic and ongoing degradation of environmentally sensitive habitats and species. While significant stands of native wetland and upland habitat areas have been preserved in and around the lagoons and other protected open space areas, corridor habitats have been adversely impacted by the development of adjacent urban areas and transportation facilities, realignment and/or channelization of inland waterways, armoring of the shoreline, vegetation clearing and thinning for fire protection of adjacent development, and rapid spread of exotic plant materials that supplant native plant species.

The peripheries of corridor lagoons are particularly subject to habitat disturbance and degradation, most often resulting from development encroachment, intense recreational use, and lack of adequate upland habitat buffers. In addition, wetland and riparian habitats typically found in inland waterways have been severely degraded by realignment and channelization of the corridor streams and drainages by both transportation improvements and adjacent land development. As with the disturbed habitat areas around many lagoon peripheries, the NCC's smaller inland streams and drainages experience erosion and infestation of non-native and invasive plant species.

Development encroachment adjacent to the NCC's lagoons and inland waterways has caused a loss of transitional habitat and has reduced the overall biological diversity of the resource, severed connections between coastal waterbodies and upland habitat, and limited the ability of the resources to evolve in response to environmental conditions such as sea level rise. In addition, development encroachment has eliminated natural buffers that provide water-quality benefits and limit disturbance of wildlife from adjacent land uses.

Upland habitats, including coastal sage scrub, southern maritime chaparral, native and non-native grassland, provide habitat for endangered and threatened plant and animal species and serve as important buffers and transitional habitat for the corridor lagoons and inland waterways. Incremental loss of upland habitat areas in the corridor from adjacent urbanization has resulted in significant cumulative impacts to open space areas, transitional and upland habitats and the numerous special status plant and animal species they support. These upland areas also provide wildlife corridors that connect remaining coastal and inland habitat areas, which allows for wildlife movement. In some locations, the existing transportation facilities currently act as barriers to wildlife migration where lagoons, rivers, creeks, and the surrounding upland habitat would otherwise provide corridors for wildlife to cross between inland and coastal areas.

5.5.2.2 Potential TREP/PWP Project Impacts

ESHAs and special-status species are known to occur within the project improvement areas and could be affected by proposed grading, construction, and operational activities. ESHAs in the corridor have been subject to disturbance as a result of development; thus, the remaining habitats within the corridor have become increasingly valuable as a resource. Further loss and degradation of these communities could occur if corridor projects located in areas of sensitivity are not properly designed, monitored, and managed during construction to avoid or mitigate potential impacts to the resource.

TREP/PWP improvements located within or adjacent to ESHAs could result in impacts to ESHAs and special-status species as result of:

- Providing inadequate setbacks/buffers between development and areas containing ESHA necessary to ensure adjacent land uses are developed and maintained compatible with the continuance of habitat areas.
- Short-term construction activity impacts that could inadvertently and unnecessarily encroach into ESHAs, parks and recreation areas thereby affecting sensitive habitat and special-status species.
- Short-term construction activity impacts that could occur during important roosting, breeding, foraging, migrating, and nesting periods for special-status species or otherwise displace sensitive wildlife species.
- Potential adverse impacts to riparian habitat and marine resources from stream alterations, increased erosion, and contaminated storm runoff.
- Construction activities and/or long-term maintenance and operational activities for portions of the rail corridor presently located at or near coastal bluffs and associated shoreline protective features in the marine environment.
- Facility night-lighting impacts that could alter or disrupt feeding, roosting, breeding, foraging, migrating and nesting of wildlife species and special-status species.
- Bridge improvements involving pilings and structural grade beams resulting in direct disruption and displacement of sensitive habitat and wetlands and indirect shading impacts resulting in decreased light penetration in coastal waterbodies and loss of eelgrass.

However, without the proposed TREP/PWP infrastructure improvements, the corridor's wetland, riparian and upland habitat areas will continue to degrade. The proposed transportation infrastructure improvements, when combined with the TREP/PWP Resource Enhancement Program (detailed in Chapter 6), would significantly restore and enhance natural resources in the corridor and thereby improve many of the existing deficiencies affecting the corridor's environmentally sensitive habitat areas and special-status species. As discussed in Section 5.4, the TREP/PWP would modify existing transportation infrastructure to improve existing deficiencies of water quality, lagoon, wetland and riparian habitat resources and wildlife corridors, which would otherwise remain extremely limited and unlikely. In addition, implementation of the TREP/PWP Resource Enhancement Program would result in strategically acquiring and preserving ESHAs and degraded habitat areas in conjunction with habitat restoration and creation opportunities. New and improved transitional habitat and buffer areas, restored riparian corridors, and preservation and/or restoration of habitat area via the purchase of upland habitat adjacent to corridor lagoons would help address the habitat needs of special-status and wildlife species.

5.5.2.3 TREP/PWP ESHA Impacts and Allowable Uses

Section 30240 of the Coastal Act mandates that only resource-dependent uses be allowed in ESHAs. As the existing location of the NCC rail and highway facilities requires that some TREP/PWP improvements occur in areas containing ESHA, it is infeasible to avoid all impacts to ESHA during construction of the proposed improvements. A number of proposed TREP/PWP trail improvements, potential community enhancement projects (improvements for nature centers) and contemplated habitat restoration plans are considered resource-dependent uses and therefore are permitted uses in ESHAs; however, the majority of the TREP/PWP improvements consist of public facility improvements, which are not typically considered resource-dependent uses. As such, TREP/PWP improvements that do not consist exclusively of resource-dependent uses are potentially inconsistent with the limited uses permitted in ESHAs as required by Section 30240 of the Coastal Act. The issue of potential TREP/PWP conflicts with Section 30240 of the Coastal Act is discussed further in this section under Coastal Act Consistency Analysis, and is evaluated in detail in Section 5.10, Coastal Act Policy Conflict Resolution. In the event any proposed TREP/PWP improvements are found to be inconsistent with the Coastal Act's ESHA policies, the TREP/PWP should nonetheless be approved under the Coastal Act's conflict resolution provisions as discussed in Section 5.10.

5.5.2.4 LOSSAN Rail Corridor Impact Assessment

Proposed rail track improvements would primarily be contained within the existing ROW or in deep tunnels and, thus, would minimize substantial encroachment into adjacent ESHAs, and would minimize the need for significant grading and landform modification that could otherwise disrupt and/or displace habitat areas. Rail improvements involving parking area expansion at stations would primarily occur in developed areas and are therefore not likely to result in substantial impacts to ESHA; however, construction of a new platform at the Del Mar Fairgrounds would potentially involve new development in the San Dieguito River Valley area, and therefore could possibly affect adjacent sensitive resources.

Potential rail impacts to ESHA could include permanent or temporary, and direct or indirect impacts to sensitive habitat areas and/or special status species. Direct impacts to ESHA could include wildlife mortality, and permanent displacement and removal of vegetation and habitat within the footprint of the physical improvements. Indirect operational impacts could include increased noise from trains (including horns), increased shadow effects from elevated infrastructure over plant and wildlife habitat areas, mortality to state and federally listed species from the increased speed and frequency of trains, and leaking cargo containers or accidents where toxic chemicals may be spilled into sensitive areas. These potential impacts would be assessed in detail at the project-level environmental review, as applicable, to better define their likelihood, extent, and severity.

Federal and state regulations set forth and define required railroad safety standards, which dictate maintenance activities within ROW that must occur on the railroad infrastructure. The contiguous linear track area, signal equipment areas, access roads, and parking areas are typically maintained to be free and clear of vegetation. Other maintenance activities may include inspections, replacement of ballast, ties or rails, turn-out or crossing repair, and structures and signal work. As such, infrastructure maintenance activities and inspections occurring within the railroad ROW almost exclusively occur within non-vegetated and disturbed areas. Sensitive areas between the road and the track are avoided when practicable. The majority of rail maintenance activities are performed directly on the track, some of which use machines that operate solely and exclusively on the track as well. Access from the road to the track typically is done in a non-sensitive location and material and equipment is then moved along the track to the work location. If work is performed at night, lighting is of relatively low power and is located in close proximity to the work area, focusing directly onto the track.

Temporary impacts would be those related to construction activities including, but not limited to, construction access, material storage, excavation spoils handling areas, and staging areas. Potential impacts may include disturbance to or removal of habitat or sensitive plant species or vegetation communities, and wildlife displacement and disruption. In lagoon areas and bridge work across rivers and streams, construction may involve extensive in-water work, resulting in turbidity and sedimentation impacts, disturbance or removal of underwater habitat features such as large rocks, boulders, or existing earthen fill, and vibration impacts to aquatic life from pile driving activities. Temporary indirect impacts would include those resulting from construction-related noise (including construction equipment, haul trucks, and tunnel portal excavation activities), lighting during nighttime work, and other disruptions to or physical separation of habitat areas.

Upland Habitat

TREP/PWP improvements would result in unavoidable impacts to potential ESHAs. Preliminary assessment indicates that approximately 17.5-20 acres of native upland habitat within the rail corridor would be directly impacted by proposed rail improvements. An additional 11–12 acres of native upland impacts could occur with rail projects included in the unconstrained vision project phase of the Preliminary Phasing Plan.

Plants

Generally, rail alignment options that involve tunneling avoid most impacts to plants because of tunneling below the ground surface; however, at-grade improvements would disturb the ground surface, thus, potentially resulting in impacts to plant resources. In addition, trenching for rail improvements could remove vegetation, which may affect plant resources. As such, the trench options for rail improvements would have a slightly higher potential for impacts to plant resources, as vegetation removal would be greater than at-grade options.

Construction could, in certain circumstances, encourage the spread of noxious weeds or other exotic plant species. Seeds of non-native plants can adhere to tires of construction vehicles or contaminate fill that may need to be imported into the construction area. Trains themselves may also contribute to the spread of seeds of exotic plant species.

Wildlife

In Oceanside and Carlsbad, California Natural Diversity Database (CNDDB) records some areas as potentially occupied by nine special-status species. USFWS data indicate that designated critical habitat for the tidewater goby and San Diego fairy shrimp could be affected in this segment. Waters and wildlife habitat could be affected at the San Luis Rey River, Buena Vista Lagoon and Ecological Reserve, Agua Hedionda Lagoon and surrounding open areas, and the Batiquitos Lagoon and Ecological Reserve, particularly during construction near or in the waterways and lagoons. Wildlife may use this reach of the San Luis Rey River as a movement corridor because the area is highly urbanized. CSS occupied by gnatcatchers in this segment could also be affected. Double-tracking across Buena Vista Lagoon could also affect the light-footed clapper rail.

In Encinitas and Solana Beach, CNDDB records some areas of southern coastal salt marsh as potentially occupied by the light-footed clapper rail and the southern maritime chaparral in this rail segment, as well as 11 special-status species. Wildlife habitat, and possibly wildlife movement corridors, would be temporarily be affected at the San Elijo Lagoon and Ecological Reserve during construction in or around the lagoon. Agency comments also indicate that CSS occupied by the gnatcatcher could be affected in this segment.

In Del Mar, there is the potential for high-quality CSS supporting gnatcatchers to exist and may be fragmented where the Camino Del Mar tunnel option daylights at the south end of Del Mar, and at the northern end of the I-5 tunnel. In addition, there are some areas of southern maritime chaparral mapped along the tunnel alignment. The CNDDB records 12 special-status species along the Camino del Mar alignment, and 17 along the I-5 tunnel alignment. For either tunnel alignment option, wildlife habitat and possible wildlife movement corridors would be affected at the San Dieguito Lagoon and surrounding open areas, and Los Peñasquitos Lagoon and Preserve.

In the University City area, the CNDDB records 10 special-status species within the Miramar Hill study area (associated with the UCSD rail tunnel option) and 4 special-status species for the I-5 option. Portals at the ends of either tunnel may affect the movement of wildlife along north-facing slopes above Peñasquitos Creek and Sorrento Valley, and in the canyons south of UTC.

Generally, rail alignment options that involve tunneling would avoid most impacts to wildlife due to tunneling below the ground surface; however, at-grade improvements would disturb the ground surface, thus potentially resulting in temporary and possibly permanent impacts to resources. In addition, trenching for rail improvements could remove vegetation, which may also affect wildlife resources that depend on those plants. As such, the trench options for rail improvements would have a slightly higher potential for impacts to wildlife resources, as vegetation removal would be greater than at-grade options.

5.5.2.5 I-5 Highway Corridor Impact Assessment

Upland Habitat

Permanent impacts to eight sensitive upland habitat associations would occur as a result of implementing proposed highway improvement, including Baccharis scrub, disturbed Baccharis scrub, CSS, disturbed CSS, maritime succulent scrub, non-native grassland, southern maritime chaparral, disturbed southern maritime chaparral habitat. The greatest impact would be to non-native grassland and disturbed CSS on the cut slopes of the I-5 in the southern half of the project study area. The 10+4 with Barrier alternative has the largest permanent impact footprint of the four build alternatives and, thus, has the most impact to sensitive upland and wetland habitats – impacts to native upland areas would range from 25-33.5 acres.

Temporary construction impacts to sensitive, native upland areas are anticipated to occur in five habitats and would include 0.1 acres Baccharis scrub, 3.28 acres of CSS, 0.89 acres of maritime succulent scrub, 0.46 acres of southern maritime chaparral, and 0.05 acres of native grassland. Impacts would be minimized to a degree by removing vegetation at a time of year that is less sensitive for the animal species that depend on the habitat for food, breeding, etc.

Plants

Eight sensitive plant species could be affected by proposed highway corridor improvements: Del Mar sand aster, coastal scrub oak, Orcutt's pincushion, sea dahlia, wart-stemmed ceanothus, coast barrel cactus, southern tarplant, and torrey pine. The degree of impact depends on the amount and location of fill needed. Mitigation measures that establish the protocol to minimize the overall harm to these species include salvaging and replanting them off-site.

Eelgrass is considered a special aquatic site according to the US Environmental Protection Agency and US Army Corps of Engineers and is found in the open water areas of Batiquitos and Agua Hedionda Lagoons. Permanent impacts to eelgrass resulting from the 10+4 with Barrier alternative would be

approximately 0.15 acres at Batiquitos and Agua Hedionda Lagoons (total). Approximately 0.26 acres of eelgrass would be temporarily impacted by the 10+4 with Barrier alternative.

Constructing any of the build alternatives would provide an opportunity to control some of the invasive species on the slopes of the project or during ground-disturbing activities. Through careful handling of the soil and equipment that works the soil, the invasive plants currently within the impact area could be removed. Revegetating the slopes would require maintenance to keep the weed species from reinvading the new slopes. Partnerships with the lagoon foundations and land owners would be required to eradicate similar invasive species outside of the impact areas.

Wildlife

Twenty-one wildlife sensitive species are located within the highway corridor and are anticipated to be affected by this project. Based on vegetation impacts, there would be a corresponding impact to animals that depend on those plants such as the San Diego horned lizard, Coronado Island shark, orange-throated whiptail, rufous-crowned sparrow, raptors, loggerhead shrike, desert woodrat, and San Diego pocket mouse. Wildlife may also temporarily relocate during construction to avoid noise impacts and impacts associated with vegetation loss. Indirect impacts could result from increased ambient lighting, exposure to invasive species, habitat edge effects, and increased noise levels.

Of the fish and wildlife sensitive species historically found within the project area, there are possible direct or indirect impacts for the following species: Pacific pocket mouse, Light-footed clapper rail, California brown pelican, California least tern, Western snowy plover, Coastal California gnatcatcher, least Bell's vireo, Belding's savannah sparrow, southwestern willow flycatcher, tidewater goby, and the Southern steelhead trout – Southern ESU.

I-5 currently acts as an impediment for east to west movement for some wildlife. Each of the lagoons, rivers, and creeks and the surrounding upland habitat are potential corridors for wildlife to cross from east to west. Widening the freeway would not necessarily cut off these corridors; however, they could make existing crossings less attractive for use by wildlife. Studies have found that wildlife, especially large mammals, use wider wildlife crossings/corridors as the length of travel increases. Most of the existing lagoon bridges have steep, narrow abutments that are used by wildlife. The new bridges at the lagoons are being designed with a bench at the abutment to facilitate wildlife movement as well as use by hikers. Although wildlife avoid people, wildlife generally use the trails under the bridges at night and hikers generally use the trails during the day. Corridors at locations where bridges would not be replaced—San Dieguito and San Luis Rey—should not be further constrained due to large areas for movement and minimal increases to bridge width.

Designated critical habitat for the least Bell's vireo, southwestern willow flycatcher, tidewater goby, and 'the California gnatcatcher occur in the highway corridor. No least Bell's vireo critical habitat would fall within riparian habitat in the project footprint; rather, the coverage would include existing SR 76 and some ornamental plantings. The majority of the San Luis Rey River is critical habitat for the southwestern willow flycatcher, and proposed highway improvements could permanently affect 2.8 acres of southwestern willow flycatcher critical habitat primarily by shading impacts due to the San Luis Rey bridge. Tidewater goby critical habitat would be affected in the open-water areas of Aqua Hedionda Lagoon, ranging between 4.21-5.87 acres, depending on the preferred alternative selected for the I-5 NCC project. 'Permanent impacts to CSS in the proposed critical habitat for the California gnatcatcher would include the freeway, the lagoons, and other habitats not supporting primary constituent elements; when assessing only those upland habitats that support the primary constituent elements, impacts could range from 24.5-28 acres, depending on the preferred alternative selected for the highway improvements.

Replacing and constructing the bridges in Batiquitos Lagoon, Agua Hedionda Lagoon, and San Luis Rey River could adversely affect EFH. Shade from the wider bridges and increased runoff from the wider roadway could have indirect impacts to EFH.

5.5.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

Proposed rail and highway improvements would potentially affect ESHAs in the corridor; however, the majority of program improvements would occur within previously disturbed and developed areas of existing rail and highway ROW, and adjacent land uses. In this regard, the TREP/PWP program improvements mitigate, to a large extent, potential impacts to ESHAs through design. Where facility improvements could adversely affect resources, mitigation measures would be implemented to avoid and minimize, to the extent feasible, impacts to resources.

As described in Section 5.4, the proposed TREP/PWP provides a fundamentally unique opportunity to implement a comprehensive, corridor-wide program to restore ESHA and wetland habitat along the 30-mile NCC coastline. Implementation of a corridor-wide resource enhancement program could help to restore ESHA features lost by previous construction of adjacent development and uses, and the transportation facilities. In addition, the proposed TREP/PWP Resource Enhancement Program, detailed in Chapter 6, Implementation, would facilitate acquisition and restoration of upland and wetland habitat areas throughout the corridor, and could facilitate major lagoon restoration programs that could include improved tidal circulation and habitat diversity in the San Elijo and Buena Vista Lagoon systems. Restoring tidal circulation in lagoon systems would significantly improve water quality and the ecological value of the lagoons and adjacent areas to better support ESHAs, special-status species and wildlife. Table 5.5-2 identifies potential upland ESHA impacts, restoration and enhancement opportunities by project phase, as established by the TREP/PWP Implementation Plan Framework (Chapter 6).

5.5.3.1 TREP/PWP Lagoon, Wetland, Riparian and Upland Enhancement Opportunities

The TREP/PWP includes a comprehensive Resource Enhancement Program that would serve to significantly enhance water quality and marine resources in the corridor by implementing a combination of traditional and non-traditional measures to mitigate coastal resource impacts of the proposed mobility improvements, and to enhance and restore resources beyond standard mitigation requirements, particularly as it relates to marine resources. Chapter 6, Implementation, details the TREP/PWP Resource Enhancement Program as part of the TREP/PWP Implementation Framework. The program includes multiple elements for completing and facilitating resource enhancement and habitat mitigation on a corridor-wide level including securing no net loss of habitat, habitat preservation, and facilitating comprehensive lagoon planning, restoration, and maintenance programs.

The Resource Enhancement Program would create habitat or enhance degraded habitat prior to project implementation thus eliminating a temporary loss in the amount of habitat in the corridor. In addition, the program provides for no net loss of habitat to ensure that the variety and range of significant coastal habitats in the corridor is not diminished due to the proposed rail and highway improvements. The program also preserves remaining sensitive habitats in the corridor. SANDAG/Caltrans have acquired property throughout the corridor for which habitat improvements would be implemented pursuant to the proposed Resource Enhancement Program, including opportunities to create and/or restore approximately 95 acres of upland habitat area, and to preserve approximately 36.4 acres of habitat in key locations adjacent to other significant natural resources.

TABLE 5.5-1: POTENTIAL UPLAND ESHA IMPACTS AND MITIGATION/ENHANCEMENT OPPORTUNITIES (BY PROJECT PHASE)

Phase	Transportation Improvements	Impacts (Acres)	Creation (Acres)	Restoration (Acres)	Preservation (Acres)
Initial-Term	2 HOV lanes & noise barriers - Manchester Ave to La Costa Ave	I-5: 49.5–59.5	San Dieguito River Valley: 57.0 Dean: 21.6 Pardee Carmel Valley: 10.7	Pardee Carmel Valley: 5.7	Hallmark: 10.8 Dean: 1.5 La Costa: 20.5 Lazar: 3.6
	2 HOV lanes & noise barriers – La Costa Ave to SR 78				
	2 ML from La Jolla Village Dr to SR 56, includes Voigt DAR & I-5 /I-805 HOV Connector				
	2 ML from SR 56 to Manchester Ave, includes Manchester DAR & San Elijo Bridge Replacement				
	Genesee SB Operational Improvements				
	5a – Oceanside Coaster Stub Track	LOSSAN: 2–3.5			
	5c – Oceanside Metrolink Stub Track				
	8 – Carlsbad (CP Carl to CP Farr) Double Track				
	22a – Sorrento Valley Double Track				
	23 – Sorrento to Miramar Phase I				
	35 – Poinsettia Station Run-Thru Track				
	COMBINED INITIAL-TERM TOTAL	51.5–63 acres			
Mid-Term	2 ML from Manchester to Agua Hedionda Lagoon, includes Cannon DAR, Batiquitos and Agua Hedionda Lagoons Bridge Replacements	I–5: 16–31			
	I-5/SR56 Interchange Improvements				
	I-5/SR78 Interchange Improvements (Pending)				
	3 – CP Eastbrook to CP Shell Double Track	LOSSAN: 0			
	6 – Carlsbad Village Double Track				
	12 – Encinitas Pedestrian Crossings				
	13 – Encinitas Station Parking				
	15 – CP Cardiff to CP Craven – San Elijo Lagoon Double Track				
	16 – Solana Beach Station Parking				
	COMBINED MID-TERM TOTAL	16–31 acres			

TABLE 5.5-1 POTENTIAL UPLAND ESHA IMPACTS AND MITIGATION/ENHANCEMENT OPPORTUNITIES (BY PROJECT PHASE) (CONTINUED)

Phase	Transportation Improvements	Impacts (Acres)	Creation (Acres)	Restoration (Acres)	Preservation (Acres)
Long-Term	2 ML from Past Agua Hedionda Lagoon to SR 78	I-5: 10–13			
	4 ML from SR 78 to Harbor Drive, includes Oceanside Blvd DAR & Buena Vista Lagoon Bridge Replacement				
	Construct Braided Ramps from Genesee to Sorrento Valley				
	5b – Oceanside Station Parking	LOSSAN: 15.5-16.5			
	7 – Carlsbad Village Station Parking				
	9 – Carlsbad Poinsettia Station Parking				
	10 – CP Ponto to CP Moonlight Double Track				
	14 – CP Moonlight to CP Swami Double Track				
	17 – San Dieguito Bridge/Double Track				
	18 – Del Mar Fairgrounds Platform				
	24 – Sorrento to Miramar Phase II				
	COMBINED LONG-TERM TOTAL	25.5–29.5 acres			
NCC TOTALS (ALL PHASES EXCLUDING VISION)		93-123.5 acres	89.3 acres	5.7 acres	36.4 acres
Vision	11 – Leucadia Blvd Grade Separation	LOSSAN: 11–12			
	19 Del Mar Bluffs Stabilization Phase 3				
	20/21 – Del Mar Tunnel - Camino Del Mar / Peñasquitos Double Track Option - I-5 / Peñasquitos Option				
	22b – Peñasquitos Double Track				
	25/26 – UTC Tunnel - UTC Alignment Option - I-5 Alignment Option				
	VISION TOTAL	11–12 acres	0 acres	0 acres	0 acres

* I-5 upland ESHA totals include Baccharis scrub, coastal sage scrub, chaparral, southern maritime chaparral, coastal bluff scrub, maritime succulent scrub, and saltbush scrub. LOSSAN upland ESHA totals include coastal sage scrub, chaparral, and oak woodland.

In addition, the TREP/PWP would facilitate comprehensive lagoon restoration efforts for San Elijo and Buena Vista Lagoons. These efforts would not only serve to substantially enhance and restore water quality in the corridor, but they would also serve to restore, enhance, and protect different habitat types within the lagoon ecosystems. While these restoration efforts would not focus on traditional in-kind habitat replacement mitigation ratios, the overall programs would result in the restoration and enhancement of an integrated ecosystem, providing habitat for fish, birds, and benthic organisms, which would adequately compensate for the loss of marine habitat that would occur from the TREP/PWP rail and highway improvements. Opportunities for upland, lagoon, wetland, and riparian resource enhancement have been reviewed in all the watersheds along the NCC. These opportunities are described in detail in Chapter 4, Scope of Planned Improvements, and in Section 5.4, Marine Resources.

Further, the TREP/PWP includes a community enhancement opportunity at Carmel Valley Road: removing fill at the undercrossing to improve use of the area for bicycles and pedestrians during the day, and for wildlife during the evening. The TREP/PWP also would provide a unique opportunity to improve the coastal bluff area in Del Mar by removing the existing rail service from the bluff area and precluding further rail construction along the bluffs. These future improvements could reduce development and maintenance activities on the bluff and shoreline and create an opportunity to remove existing shoreline protective devices, restore coastal bluff resources, and reduce long-term shoreline erosion impacts in the marine environment.

5.5.3.2 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements shall be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values. Rail development in areas adjacent to ESHAs and parks and recreation areas should be sited and designed to prevent impacts, which would significantly degrade those areas, and should be compatible with the continuance of those habitat and recreation areas. Project-level analysis for proposed rail improvements would not occur until project alternatives are chosen; preliminary design, engineering, and resource impact analyses have been developed; and mitigation measures and monitoring plans prepared, as applicable. As such, the analysis contained herein for the proposed rail improvements includes discussion and analysis of conceptual plans, preliminary resource impacts, and design and development strategies to address potential resource impacts. The following design and development strategies provide guidance in addressing potential impacts to ESHA and special status species for specific rail development projects. As proposed rail improvement plans are further developed, additional design and development strategies to address potential impacts to ESHA and special-status species would be evaluated by the lead agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. Project-level analysis for potential impacts of rail improvements on ESHAs and special-status species should be conducted and subject to review during subsequent project-specific Federal Consistency Review to assess and identify all potential permanent or temporary impacts to ESHAs and special-status species and appropriate mitigation measures to ensure project consistency with Coastal Act Section 30240.
2. Mitigation strategies should be applied to all future project-specific rail improvements to avoid or reduce impacts to ESHAs and special-status species, as applicable, which may include:
3. Biological Resources Management Plans (BRMP) prepared to specify the design and implementation of biological resources mitigation measures, including habitat replacement and revegetation, protection during construction, performance (growth) standards, maintenance criteria, and monitoring requirements. The USFWS, CDFG, and USACE would review Draft BRMPs. The

primary goal of a BRMP is to ensure the long-term perpetuation of the existing diversity of habitats in the project area and adjacent urban interface zones.

4. Impact reduction measures for plant communities should include construction monitoring and should fully mitigate impacts pursuant to the resource enhancement program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration program mitigation.
5. Mitigation measures for sensitive plant species should include, but not be limited to, preconstruction focused surveys, construction monitoring, relocation of plants, seed collection, plant propagation, out-planting to a suitable mitigation site, and participation in an existing Habitat Conservation Plan. Prior to construction, focused surveys should be conducted for sensitive plant species identified as occurring in the study area. Locations of sensitive plant species observed would be mapped on construction drawings. Research must be conducted on appropriate methods to use on a species-by-species basis. Some plant species may require transplantation, whereas others may germinate from seed, and still others may need to be propagated in a greenhouse prior to planting on an appropriate mitigation site.
6. Specific mitigation measures for weed control should be developed to minimize or avoid the spread of weeds during construction and operation. Preventive measures during construction could include identifying areas with existing weed problems and measures to control traffic moving out of those areas (e.g., cleaning of construction vehicles, limitations on movement of fill). Mitigation for operational impacts would also be developed.
7. Mitigation measures for sensitive wildlife species may include, but not be limited to, preconstruction focused surveys, construction monitoring, restoration of suitable breeding and foraging habitat, purchase of credits from an existing mitigation bank, and participation in an existing HCP. Prior to construction, focused surveys would be conducted for sensitive wildlife species identified as occurring in the study area. Locations of sensitive wildlife species observed would be mapped on construction drawings. Construction could be phased around the breeding season for sensitive wildlife species.
8. Wildlife crossings would be of a design, shape and size to be sufficiently attractive to encourage wildlife use. Overcrossings and undercrossings for wildlife would be appropriately vegetated to afford cover and other species requirements. Functional corridors would be established to provide connectivity to protected land zoned for uses that provide wildlife permeability.

5.5.3.3 I-5 Highway Corridor Policies and Implementation Measures

In addition to the Resource Enhancement Program habitat restoration and enhancement opportunities, which would exceed standard mitigation requirements for project impacts, Caltrans would implement the following policy and implementations measures to ensure that proposed improvements are designed, implemented, and maintained to provide for maximum protection of ESHAs and special status species. Notice of Impending Development (NOID) submittals for highway, community and resource enhancement project implementation that would potentially impact resources as identified on Figures 5.5-1A–J and 5.5-2A–J should demonstrate compliance with the following policy and implementation measures.

Policy 5.5.1: Development of NCC transportation facility and community enhancement projects should be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values. Development in areas adjacent to ESHAs should be sited and designed to prevent impacts that would significantly degrade those areas, and should be compatible with the continuance of those habitat and recreation areas.

Implementation Measure 5.5.1: The following conservation measures should be implemented during construction for all highway, community and resource enhancement projects to minimize impacts to sensitive communities as identified on Figures 5.5-1A–J and 5.5-2A–J.

- All native habitats outside the permanent and temporary construction limits would be designated as Environmentally Sensitive Areas (ESAs) on project maps. ESAs should be temporarily fenced during construction with orange plastic snow fence. No access would be allowed within the ESAs.
- Cut slopes would be revegetated with native upland habitats with similar composition to those within the project limits. Fill slopes and areas adjacent to wetlands and drainages would be revegetated with appropriate native upland and wetland species. The revegetated areas would have temporary irrigation and be planted with native container plants and seeds selected by the biologist. There would be at least three years of plant establishment/ maintenance on these slopes to control invasive weeds and ensure that the plants become established. Bioswales and detention basins would be planted with appropriate native species as determined by the biologist and storm water personnel. Slopes adjacent to developed urban areas would be vegetated with native and drought tolerant non-invasive species selected by the biologist and landscape architect. Interchanges located in urban areas would be landscaped with native or ornamental non-invasive species.
- Any seeding of native upland habitats would be completed between October and February to ensure that the seed has proper conditions for germination.
- Duff from areas with CSS, maritime succulent scrub, and maritime chaparral would be saved to aid in revegating the slopes with native habitats.
- All temporary impact areas would be revegetated and restored to pre-existing conditions.

Implementation Measure 5.5.2: Seeds should be collected or plants should be salvaged to the extent practicable in the impact areas for all highway, community and resource enhancement projects. Salvaged plants and seed should be planted in mitigation sites, on revegetated new slopes, or in revegetated areas that were temporarily impacted.

Implementation Measure 5.5.3: All efforts should be made to eradicate invasive plant species. Revegetation of the slopes should be maintained to keep weed species from reinvading the new slopes. Measures should be implemented to avoid the transporting, use and disposing of soils with invasive weed seeds and all heavy equipment should be washed and cleaned of debris prior to entering any lagoon area, to minimize spread of invasive weeds.

Implementation Measure 5.5.4: To minimize impacts to nesting migratory bird species, all native vegetation and non-native shrubs and trees within the impact areas should be removed outside of the breeding season (February 15 to August 31), if possible. Otherwise, a qualified biologist should thoroughly survey all vegetation prior to removal to ensure there are no nesting birds on-site. If nesting birds are identified on-site, vegetation removal should be delayed until the chicks have fledged or the nest has failed.

Implementation Measure 5.5.5: To minimize impacts to migratory birds dependent on lagoons for stop over, resting, and foraging habitats along the Pacific flyway, TREP/PWP construction activities should not occur in more than two lagoons at any one time.

Implementation Measure 5.5.6: Exclusion devices should be installed on bridge drain holes and ledges during the non-breeding season (September 1 through February 15) to stop swallows, swifts, and any other birds or bats from nesting on or within bridges to be demolished.

Implementation Measure 5.5.7: Impacts to Del Mar Manzanita should be mitigated by salvaging individual plants from the impacted area and placing them in a compensatory mitigation site for the project.

Implementation Measure 5.5.8: The following mitigation measures should be implemented for all highway, community and resource enhancement project to minimize impacts to threatened and endangered species during construction.

- A channel large enough for fish passage would be kept open throughout construction within the San Luis Rey River and all of the lagoons.
- All pile driving near the lagoons would be completed outside the bird breeding season (February 15-August 31) to minimize construction noise impacts to bird species around the lagoons.
- A qualified biologist would be made available for both the pre-construction and construction phases to review grading plans, address protection of sensitive biological resources, and monitor ongoing work. The biologist should be familiar with the habitats, plants, and wildlife of the Project area, and maintain communications with the resident engineer, to ensure that issues relating to biological resources are appropriately and lawfully managed.
- Detention basins would be placed in many of the loop ramps, and bioswales would be placed on many of the slopes to treat runoff from the freeway.
- Lighting used at night for construction would be shielded away from ESAs.
- Dust generated by proposed operations would be controlled with BMPs.

Implementation Measure 5.5.9: A project-specific biological evaluation of the development area should be conducted for all improvements proposed in areas where ESHA and special status species may occur and should be submitted with the project specific NOID. The evaluation should include any changed site conditions that could affect environmentally sensitive habitat area values and/or impact special-status species protected by the TREP/PWP. A biological evaluation should be completed in the proposed development area (i.e., the proposed development footprint and a surrounding 100-foot buffer area). Should ESHAs and/or special-status species be identified during this process that are not already considered in the TREP/PWP, all environmentally sensitive habitat area and/or special-status species resource protection measures included in this TREP/PWP should be applied to the newly identified resources. For any newly identified ESHA, an appropriate buffer should be established, based on site-specific conditions in accordance with Implementation Measure 5.5.10.

Implementation Measure 5.5.10: Buffers/setbacks for ESHAs delineated at the time of TREP/PWP certification should be maintained, unless reduced ESHA buffers/setbacks are authorized pursuant to the NOID and/or Public Works Plan Amendment procedures contained in Chapter 6. For any new ESHAs identified and delineated pursuant to Implementation Measure 5.5-9, development should be sited and designed to minimize ESHAs impacts, appropriate buffers/setbacks provided based on a site-specific biological evaluation confirming the buffers/setbacks are adequate to avoid or minimize significant adverse impacts to ESHA.

Implementation Measure 5.5.11: NOID submittals for native upland habitat creation, restoration and/or enhancement plans proposed in accordance with the Resource Enhancement Program detailed in Chapter 6 should include the following information and materials:

- Clearly stated objectives and goals for the habitat creation, restoration and/or enhancement plans.
- Baseline data regarding the biological, physical, and chemical criteria for the creation, restoration and/or enhancement site.

- Documentation demonstrating the proposed creation, restoration, and/or enhancement project will continue to function as a viable over the long-term.
- Technical detail in the project design including, at a minimum, an engineered grading plan and water control structures, methods for conserving or stockpiling topsoil, a planting program including removal of exotic species, a list of all species to be planted, sources of seeds and/or plants, timing of planting, plant locations and elevations on the mitigation site base map, and maintenance techniques.
- Documentation of performance standards, which provide a mechanism for making adjustments to the creation, restoration and/or enhancement site when it is determined through monitoring the enhancement or restoration techniques are not successful.
- Description of management and maintenance requirements, and provisions for remediation should the need arise.
- An implementation plan that demonstrates there is sufficient scientific expertise, supervision, and financial resources to carry out the proposed activities.
- A monitoring program to be implemented for five years after completion of the habitat creation, restoration and/or enhancement project with appropriate provisions to ensure the project has successfully met the stated goals and objectives.

5.5.4 Coastal Act Consistency

Coastal Act Section 30240

Coastal Act Section 30240 provides for the protection of environmentally sensitive habitat areas of the coastal zone:

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 30240 of the Coastal Act sets forth a strict limitation on the type of development and uses that are permitted to occur in ESHA, and requires that new development be compatible with the continuance of ESHA, and be sited and designed to prevent impacts that would significantly degrade ESHA.

5.5.4.1 TREP/PWP ESHA Impacts and Allowable Uses

Proposed rail and highway improvements could result in impacts to ESHA as described above. As the existing location of the NCC rail and highway facilities requires that some TREP/PWP improvements occur in areas containing ESHA, it is infeasible to avoid all impacts to ESHA during construction of the proposed improvements. Further, because the proposed public transportation facility improvements do not constitute a resource-dependent use, proposed facility improvements that would result in direct impacts to ESHA would likely be inconsistent with Section 30240 of the Coastal Act. The issue of potential TREP/PWP conflicts with Section 30240 of the Coastal Act is discussed further in this section under Coastal Act Consistency Analysis, and is evaluated in detail in Section 5.10, Coastal Act Policy Conflict Resolution. As detailed in Section 5.10, the proposed TREP/PWP can be found consistent with

the Coastal Act through the conflict resolution provision of Coastal Act Section 30007.5, when it is demonstrated that there are no feasible less-damaging alternatives for project components that would result in unavoidable impacts to ESHA, and that feasible mitigation measures have been included in the TREP/PWP to minimize significant adverse environmental impacts.

Evaluation of Feasible Alternatives

Section 5.10, Coastal Act Policy Conflict Resolution analyzes program-level alternatives to address mobility deficiencies and enhance multi-modal access throughout the corridor. Based on this analysis, the program of rail and highway improvements included in the TREP/PWP provides the least environmentally damaging, feasible project alternative to avoid or reduce impacts to coastal resources, while implementing Coastal Act policies that mandate protection of coastal resources by: 1) minimizing energy consumption and vehicle miles travelled, and protecting air quality (Section 30253), 2) concentrating new development in or adjacent to areas able to accommodate growth (Section 30250), 3) providing and enhancing transit and non-automobile circulation, and assuring that the potential for public transit is provided for high intensity uses (Section 30252), and 4) protecting and enhancing public access to recreational resources in the Coastal Zone (Sections 30210, 30211, 30212, 30212.5, 30213, 30223, and 30252). The proposed TREP/PWP improvements consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to the existing rail and highway facilities are generally expansions or reconfigurations of existing facilities or, where new rail alignment tunnel options are being considered, would occur primarily below ground; therefore, by design, the proposed TREP/PWP rail and highway improvements would involve limited expansion or encroachment into wetlands and other sensitive habitat areas that might otherwise occur if new transportation infrastructure were to be constructed as separate and distinct facilities from the existing rail and highway ROW to address mobility deficiencies and enhance multi-modal access throughout the corridor.

In addition to the programmatic analysis of project alternatives discussed above and included in Section 5.10, detailed project alternatives analyses for proposed rail and highway improvements for the TREP/PWP has commenced and will continue as rail project designs are slated for implementation and the *I-5 NCC Project Draft EIR/EIS* proceeds through the environmental review process. Feasible project alternatives for rail improvements potentially affecting ESHA would be determined in project-level analyses and during phase federal consistency review, as applicable. The project alternatives analysis/determination for highway improvements potentially affecting ESHA has begun as part of the *I-5 NCC Project Draft EIR/EIS* public review period, and upon completing that process and selection of a preferred alternative, additional resource-specific alternatives analysis will be included in the TREP/PWP to evaluate the TREP/PWP highway improvements for consistency with Section 30240 of the Coastal Act.

Feasible Mitigation Measures

The TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures, and the following Consistency Analysis sections for proposed rail and highway improvements demonstrate that feasible mitigation measures have been included in the TREP/PWP as project design features, design/development strategies for rail improvements, and/or policies and implementation measures for highway improvements to minimize significant adverse environmental impacts.

5.5.4.2 LOSSAN Rail Corridor Consistency Analysis

The TREP/PWP provides that project-level analysis for potential impacts of rail improvements on ESHAs and special-status species would be conducted and subject to review during subsequent project-specific federal consistency review, as applicable, to assess and identify all potential permanent or temporary impacts to ESHAs and special-status species and appropriate mitigation measures to ensure project consistency with Coastal Act Section 30240.

Proposed rail design and development strategies would serve to minimize and mitigate potential impacts to ESHAs. Implementation of the rail design and development strategies would require the NCC transportation facility and community enhancement projects to be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values. Similarly, development in areas adjacent to ESHAs would be sited and designed to prevent impacts that would significantly degrade those areas, and would be compatible with the continuance of those habitat areas.

Mitigation strategies would be applied to all future project-specific rail improvements to avoid or reduce impacts to ESHAs and special-status species, as applicable. Where feasible, Biological Resources Management Plans (BRMP) would be prepared to specify the design and implementation of biological resources mitigation measures, including habitat replacement and revegetation, protection during construction, performance (growth) standards, maintenance criteria, and monitoring requirements to ensure the long-term viability of habitats in the project area. Mitigation strategies would address sensitive plant and wildlife species and may include preconstruction surveys, construction monitoring, relocation of plants or plant propagation, restoration of suitable breeding and foraging habitat, consideration of wildlife corridors in design, and participation in existing Habitat Conservation Plan, where applicable.

In addition, rail design and development strategies provide that potential impacts to ESHA be fully mitigated pursuant to the Resource Enhancement Program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration program mitigation. To further protect plant communities, specific mitigation measures for weed control may also be implemented, where applicable, to minimize or avoid the spread of weeds during construction and operation.

5.5.4.3 I-5 Highway Corridor Consistency Analysis

The proposed TREP/PWP highway policies and implementation measures would serve to avoid, where feasible, and mitigate potential impacts to ESHAs. To minimize potential impacts to sensitive communities during construction of highway, community and resource enhancement projects, implementation measures would require that native habitats outside the construction limits be designated Environmentally Sensitive Areas (ESA) on project maps and access within those ESAs would be prohibited. Furthermore, cut slopes would be revegetated with native upland habitats with similar composition to those within the project limits and any seeding of native upland habitats would be completed between October and February to ensure that the seed has proper conditions for germination. Temporary impact areas would be revegetated and restored to pre-existing conditions to reduce the permanent impact of short-term construction.

Additional measures would be employed during construction to minimize impacts to nesting migratory bird species and migratory birds dependent on lagoons. All native vegetation and non-native shrubs and trees within the impact areas would be removed outside of the breeding season (February 15 to August 31), if possible. Exclusion devices would be installed on bridge drain holes and ledges during the non-breeding season (September 1 through February 15) to stop swallows, swifts, and any other

birds or bats from nesting on or within bridges to be demolished. To minimize impacts to migratory birds dependent on lagoons for stop over, resting, and foraging habitats along the Pacific flyway, TREP/PWP construction activities would not occur in more than two lagoons at any one time. When necessary, a qualified biologist would thoroughly survey all vegetation prior to removal to ensure there are no nesting birds on-site.

A qualified biologist would also be made available for both the pre-construction and construction phases to review grading plans, to address protection of sensitive biological resources, to monitor ongoing work and to minimize impacts to threatened and endangered species. Other measures implemented to minimize impacts to threatened and endangered species include maintaining adequate channel width of the San Luis Rey River and lagoons to facilitate fish passage; creation of detention basins to treat runoff from the freeway; light shielding to protect ESHAs; and, restricting pile driving activity outside of the breeding season to reduce construction noise impacts to bird species around the lagoons.

Implementation measures also require that a biological evaluation of the development area be conducted prior to each development project to evaluate any changed site conditions that could affect environmentally sensitive habitat areas and/or impact special-status species addressed by the TREP/PWP. The biological evaluation would analyze the proposed development area, which includes the proposed development footprint and a surrounding 100-foot buffer area. In the event ESHAs and/or special-status species are identified during this process that are not already considered in the TREP/PWP, all environmentally sensitive habitat area and/or special-status species resource protection measures included in this TREP/PWP would be applied to the newly identified resources.

In addition, implementation measures provide that potential impacts to ESHA be fully mitigated pursuant to the Resource Enhancement Program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration program mitigation.

5.5.4.4 Coastal Act Consistency Analysis Summary

The proposed TREP/PWP improvements consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to the existing rail and highway facilities are generally expansions or reconfigurations of existing facilities that involve minimal encroachment into adjacent areas and, as such, the majority of TREP/PWP facility improvements would not result in substantial impacts to adjacent ESHAs or special status species. Nevertheless, impacts to ESHAs would be unavoidable given the locations of the existing rail and highway facilities that cross six coastal lagoons and upland habitat areas. As such, the proposed TREP/PWP raises Coastal Act issues relative to permitted uses in ESHAs.

The TREP/PWP includes a comprehensive Resource Enhancement Program, described in Chapter 6, which would serve to significantly enhance water quality, marine and upland habitat resources, all of which would facilitate enhancement of ESHA and special status species habitats throughout the corridor. The proposed program provides for advanced mitigation opportunities that would allow for habitat creation or significant enhancement of degraded habitat prior to project implementation. This results in eliminating even a temporary loss in the amount of habitat in the corridor. In addition, the program provides for no net loss of habitat to ensure that the variety and range of significant coastal habitats in the corridor is not diminished due to the proposed rail and highway improvements. The program also provides for habitat preservation thereby facilitating conservation of remaining sensitive habitats in the corridor. In addition, the TREP/PWP would facilitate the development and implementation of comprehensive lagoon restoration efforts for San Elijo and Buena Vista Lagoons.

These efforts would not only serve to substantially enhance and restore water quality in the corridor, but they would also serve to restore, enhance, and protect different habitat types within the lagoon ecosystems. While these restoration efforts would not focus on traditional in-kind habitat replacement mitigation ratios, the overall programs would result in the restoration and ultimate enhancement of an integrated ecosystem providing habitat for fish, birds, and benthic organisms, which would not only adequately compensate for the loss of ESHA that would occur from the TREP/PWP rail and highway improvements, but would provide for enhancement of ESHA over the entire corridor.

5.5.5 Local Coastal Program Consistency

Appendix A includes detailed policy consistency analysis matrix for each certified Local Coastal Program (LCP) area that would be affected by the proposed highway corridor improvements and by those rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and, thus, fall under the exclusive jurisdiction of the Surface Transportation Board (STB), the LCP policy consistency analysis may provide guidance or background information for analyzing rail project consistency with Sections 30230, 30231, 30233, and 30236 of the Coastal Act, as appropriate and applicable (see Section 1.1.3 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). All of the LCPs include policies that mirror, in part, the requirements of Coastal Act policies addressing impacts to ESHAs; however, the certified LCPs also include a range of additional, detailed and site-specific policies and development standards that address protection, enhancement and potential impacts to ESHAs and special status species. The corridor's LCP water ESHA policies are summarized below, followed by a brief LCP consistency summary that integrates and supplements the above consistency analysis for Section 30240 of the Coastal Act. A complete list of LCP policies and corresponding consistency analysis is included in the LCP Policy Consistency Analysis matrix for each city (Appendix A).

5.5.5.1 Local Coastal Program Consistency Analysis Summary

Included in all of the LCPs are policies that are consonant with Section 30240 of the Coastal Act. In specific, this section states that 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; and that development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas 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.

Each LCP has explicit policies and/or development standards that require the protection, avoidance or minimization of effects to ESHA. Common policies and/or development standards that reflect the protection of ESHA throughout all of the jurisdictions' LCPs are:

- Minimizing grading and removal of vegetation
- Revegetating graded and disturbed areas with native, drought tolerant plant species
- Restriction or avoidance of grading and development on bluffs, canyons and/or steep slopes and/or slopes possessing ESHA
- Control of drainage and runoff to prevent siltation of ESHA throughout construction and operation/maintenance of the project, development or improvement
- Prohibiting impacts to ESHA pursuant to Section 30240 of the Coastal Act
- Prohibiting impacts to wetland and riparian habitat pursuant to Section 30233 of the Coastal Act

- Imposing setback (buffer) requirements from wetlands, streams and the shoreline
- Requiring mitigation of impacts to ESHA through either on or off-site restoration activities

These LCP policies are generally applied on a city-wide basis in the respective jurisdictions, but in some instances are also applied to specifically address the many significant coastal resources that are identified by the LCP within each city, including:

City of San Diego

The City of San Diego LCP contains further and more specific ESHA protection policies in the North City Land Use Plan, in addition to each of the five individual Community Plans affected by the proposed TREP/PWP improvements:

North City Land Use Plan

- Canyons, with their riparian habitat, should remain as open space, and similar habitat areas in side canyons also should be protected.

Torrey Pines Community Plan

- Coastal lagoons and estuaries that are designated and zoned open space shall remain undeveloped.
- Public access in areas of environmentally sensitive habitats shall be limited to low intensity recreational, scientific, or educational use. Access shall be controlled or confined to designated trails or paths, and no access shall be approved which results in disruption of habitat.
- New development adjacent to and affecting biologically sensitive areas shall be responsible for the restoration and enhancement of that area. In particular, when mitigation areas are needed for public projects, the disturbed areas in Crest Canyon should be revegetated with Coastal Mixed Chaparral and Torrey Pines.
- Riparian vegetation in channels through the Sorrento Valley industrial area shall be preserved in its natural state in order to maintain its vital wildlife habitat value. When vegetation removal is necessary for flood control, the required state and federal permits shall be obtained.
- Preserve and enhance all open space and wildlife corridors especially those linking Los Peñasquitos Lagoon with Torrey Pines State Reserve Extension and the Carroll Canyon Creek Corridor.
- Crest Canyon shall be left in its natural state in order to preserve those biologically sensitive habitats identified within this park. A small portion of the parkland located adjacent to Del Mar Heights Road and Durango Drive should accommodate some limited passive park development.
- Construction or improvements of roadways adjacent to biologically sensitive areas or open space shall be designed to avoid impacts, especially in wetlands and wetland buffer areas. Protection of sensitive habitats through buffers, realignments and reduced development areas shall also be considered.
- All Torrey Pine trees on public property should be preserved and protected.

University Community Plan

- Preserve the natural resources of the community through the appropriate designation and use of open space. Major topographic features and biological resources should be preserved as undeveloped open space.

Torrey Hills Community Plan

The policies below are cited and discussed by resource area:

- Individual projects should be designed to preserve natural topography, unique geologic formations and native vegetation to the fullest extent possible.
- Natural slopes containing native vegetation with a gradient of 25 percent or greater remaining undisturbed as a result of the hillside review process shall be placed in a permanent open space easement or deed restriction as a condition of development approval. The purpose of the open space designation shall be to protect native vegetation and visual resources of importance to the entire community.

Policies pertaining to ESHA in the Torrey Pines Community Plan include:

- Development in areas of sensitive vegetation, such as coastal sage scrub, shall be in accordance with the City's Resource Protection Ordinance as appropriate.
- Encroachments into areas of sensitive vegetation shall be as defined in the Resource Protection Ordinance, where it applies.
- To the extent applicable, all new development within the coastal zone shall be designed to be consistent with multi-species and multi-habitat preservation goals and requirements as established in the statewide Natural Communities Conservation Planning (NCCP) Program, shall comply with the City of San Diego MSCP Interim Habitat Loss Permit Process, or shall obtain an incidental take permit under Section 4d, Section 7 or Section l0a of the Endangered Species Act related to the California gnatcatcher. Compliance with these goals and requirements shall be implemented in consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Game.

North City Future Urbanizing Framework Plan

- No non-local native vegetation shall be allowed to be planted within these areas. Local native vegetation, if unavailable from on-site, can be obtained from sites with similar soils, slope, aspect, meso- or micro-climates as those on-site, preferably from nearby local sites within a ten-mile radius of the site.
- Areas of native habitat where low-impact forms of recreation can occur (such as trails), but which primarily function to provide distance and protection to the habitat protection area from lights, noise, activity, exotic plants and other potential forms of disturbance.

City of Del Mar

The City of Del Mars LCP contains policies protective of sensitive lands such bluffs, slopes, canyons, downstream waterways and vegetation, and contains a Bluff, Slope and Canyon Overlay as well as a Lagoon Overlay. Applicable policies in the LCP are:

- No grading or construction activities shall be allowed on the face of a coastal bluff unless approved as part of a Shoreline Protective Permit or Setback Seawall Permit issued in accordance with the provisions of this Land Use Plan and when such activity on the bluff face has been minimized to the maximum extent feasible necessary to provide the authorized shoreline protection.
- Areas to be retained in their natural state pursuant to the Coastal Bluff regulations shall be subject to conditions to ensure the future protection of the designated area(s) from encroachment, disturbance or degradation. Said conditions shall include the recordation of an open space deed restriction or open space easement to assure protection of the designated area and to serve notice

to the property owner, subsequent owners or interested parties of the restrictions in effect on such property.

City of Encinitas

The City of Encinitas references Section 30240(a) of the Coastal Act into its LCP, and contains various program wide policies to ensure the protection of ESHA resources with its boundaries, in addition to a Special Study Overlay designation. In particular, the policies included in the LCP are:

- The Special Study Overlay designation shall be applied to lands that, due to their sensitive nature, should only be developed with consideration of specific constraints and features related to drainage courses, bluffs, slopes, geology and soils, biotic habitat, viewsheds and vistas, and cultural resources. Development within the overlay area shall be reviewed and approved in accordance with criteria and standards that protect coastal and inland resources.
- Significant natural features shall be preserved and incorporated into all development. Such features may include bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views.
- Ecological Resource/Open Space/Parks is a category intended to be applied to both active and passive parklands; lagoons; wetland habitat areas and their adjacent buffers; and other areas of significant environmental quality or public resource value. Lands in the Ecological Resource/Open Space/Parks category, other than public parks, and similar areas for active recreation, will be limited to uses and activities related to habitat enhancement; educational and scientific nature study; passive recreation that will have no significant adverse impact on habitat values; and, aquaculture having no significant adverse effect or negative visual impact on natural processes or scenic quality.
- Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semirural living within the I-5 View Corridor and within other view corridors, scenic highways and vista/view sheds as identified in the Resource Management Element.

City of Carlsbad

The City of Carlsbad incorporates Section 30240(a) of the Coastal Act into its LCP, and contains various program wide policies in addition to policies that are specific to individual properties and areas that are protective of ESHA. The Carlsbad Habitat Management Plan (HMP) is a comprehensive, citywide program to identify how the city, in cooperation with federal and state agencies, can preserve the diversity of habitat and protect sensitive biological resources within the city and the Coastal zone. Policies in the LCP that are applicable to the area affected by the proposed project include:

- Buffers to be provided between all preserved habitat areas and development and minimum buffer widths are follows: 100 feet for wetlands; 50 feet for riparian areas; 20 feet for all other native habitats (coastal sage scrub, southern maritime chaparral, maritime succulent scrub, southern mixed chaparral, native grassland, oak woodland).
- A no net loss of upland habitat and at least a 1:1 mitigation ratio; more specifically, impacts to Coastal Sage Scrub shall be mitigated at an overall ratio of 2:1, impacts to Southern Maritime Chaparral or Maritime Succulent Scrub shall be mitigated at an overall ratio of 3:1, with the creation component satisfying one-third of the total obligation; and Impacts to Southern Mixed Chaparral, Native Grassland and Oak Woodland shall be mitigated respectively at ratios of 1:1, 3:1 and 3:1.

- Hardline Preserve Boundaries to ensure that the future development is sited to preserve the maximum amount of ESHA within the coastal zone, and to establish viable habitat corridors and preserve areas.
- Properties constrained by ESHA in the Coastal Zone require that if more than 80% of the property by area is covered with ESHA at least 75% of the property shall be conserved, or if the City, with the concurrences of the wildlife agencies and the Coastal Commission through an LCP amendment, approved a Hardline preserve boundary for any of the above-described properties as part of the HMP, then the amount of onsite preservation as identified in the Hardline boundary shall apply.

City of Oceanside

The City of Oceanside's LCP contains policies protective of marine environments, wetlands, riparian corridors and ESHA. In specific, the LCP policies are:

- Prior to approving any developments on dry lands adjacent to Buena Vista Lagoon, the City shall consult the State Department of Fish and Game to ensure that adequate measures are provided to protect and enhance the lagoon's sensitive resources. Such measures shall include, where appropriate: a. Provision for adequate buffers between development and the lagoon b. Erection of barriers – such as fences – to prohibit access to sensitive portions of the lagoon c. Incorporation of native riparian plant species into project design to enhance habitat value d. Construction of informational signs/kiosks educating the public on the value of the lagoon, and listing the regulations for public use. Habitat restoration measures (such as removal of built up sediment) providing that such measures are approved by the State Department of Fish and Game.
- In the area between Interstate 5 and Alvarado Street, the City shall prohibit encroachment of development beyond the bluff line of the lagoon.
- New development on the private, commercially zoned land fronting the eastern segment of the lagoon, south of Highway 78 shall be sensitive to the lagoon and its environment.
- It is the policy of the City to prohibit filling in Loma Alta Creek; and the removal of existing vegetation shall not be permitted in Loma Alta Creek except when essential for flood control purposes. In such instances, the City will obtain necessary clearances from the State Department of Fish and Game prior to commencing work.
- The City shall continue to cooperate with other agencies including the State Department of Fish and Game, the Cities of Carlsbad and Vista through the Joint Powers Committee, US Fish and Wildlife Service, San Diego Association of Governments, and the Regional Water Quality Control Board in seeking ways to lessen the current impacts on the lagoon. Siltation and water pollution are two such impacts that are particularly critical.
- Any development proposed in an undeveloped area within a distance of up to 500 feet from a sensitive habitat area will be considered adjacent to that habitat area and be required to implement the mitigation measures with respect to buffer zones, grading restriction and erosion control, landscaping barriers and noise as stipulated in the LCP's Standards for the Identification and Protection of Sensitive Habitats.

The San Luis Rey Specific Plan also contains policies that are protective of ESHA, wetlands, and riparian resources, including:

- In order to protect the sensitive resources of the river area the City shall: a) Post signs at appropriate locations noting regulations on littering, off-road vehicles, use of firearms, and leash laws; b) Encourage the California Department of Fish and Game to actively enforce the Fish and

Game Code in the river area; c) Require property owners to remove debris from their properties when fire or health hazards exist; d) Monitor future public use of the river area to identify areas of overuse. If such areas are identified, take steps to restrict access commensurate with the carrying capacity of the resources; and e) Continue police and code enforcement against litterers, trespassers, off-road vehicles, and other violators.

- Developers proposing projects in the San Luis Rey Specific Plan study area shall: a) Maintain adequate buffers surrounding sensitive habitat areas, using setbacks, fencing and/or vertical separation; and b) Protect habitat for the endangered *Dudleya viscida*. Where habitat impacts are unavoidable, the developer shall transplant the species to a protected location.

Proposed highway improvements would generally be designed and implemented consistent with the cities' ESHA protection policies; however, city LCP policies requiring that new development shall not intrude into open space areas and that all mature trees and other significant existing vegetation shall be protected present potential policy conflicts for the proposed TREP/PWP improvements where such impacts cannot be avoided.

In addition, all of the corridor LCPs include specific policies that require buffers from wetland and riparian habitat areas, and some of the LCPs further address buffers for upland sensitive habitats. In addition, the LCPs collectively require both specific and unspecified mitigation requirements where impacts to wetland, riparian and sensitive upland habitat areas are permitted. The corridor LCPs collectively include a range of policy requirements that address buffers and mitigation requirements, some of which include buffer requirements without the option to adjust the buffers, and others that provide for minimum buffer requirements but allow for adjustment if certain criteria are met. Buffer areas for wetland habitats in the certified cities are generally required to be 100 feet, and pursuant to some policies, may be reduced to 50 feet or less if it is demonstrated that a smaller buffer will protect the resources of the wetland area based on site-specific information. LCP policies generally require riparian habitat buffers to be a minimum of 100 to 50 feet, and that buffers from sensitive upland areas be a minimum of 20 feet, where applicable.

The existing location of the transportation facilities requires that the proposed projects occur in areas potentially containing ESHA, therefore the proposed TREP/PWP improvements would not provide the minimum buffer requirements articulated in the corridor LCPs. In addition, because the proposed Resource Enhancement Program is intended to significantly enhance sensitive resources in the corridor by implementing a combination of traditional and non-traditional measures to mitigate coastal resource impacts and to enhance and restore resources beyond standard mitigation requirements, it is unlikely the TREP/PWP improvements would meet the traditional mitigation requirements for ESHA where included in the corridor LCPs. As such, these LCP policy requirements for the cities of San Diego, Encinitas, Carlsbad, and Oceanside present potential policy conflicts for proposed highway and community enhancement projects, which may require amendment to ensure consistency of the TREP/PWP improvements with the certified LCPs. As such, SANDAG and Caltrans may seek amendments to the LCPs of San Diego, Encinitas, Carlsbad, and Oceanside to allow for conflict resolution under Section 30007.5 of the Coastal Act. Section 5.10 evaluates the TREP/PWP improvements under the Coastal Act's conflict-resolution provision (Section 30007.5). The conflict resolution analysis concludes that denying or modifying the TREP/PWP to avoid the ESHA impacts discussed in this section would conflict with several other Chapter 3 policies of the Coastal Act, and thus, approval of the TREP/PWP on balance is the most protective of significant coastal resources.

TABLE 5.5-2: SPECIAL-STATUS PLANT SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA)

Scientific Name	Common Name	Special Status	Corridor Location	
			Rail	Highway
Adolphia californica Wats	California adolphia	CNPS List 2	San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, City of Encinitas.	Both sides of the slopes of I-5 near San Elijo Lagoon
Agave shawii	Shaw's agave	CNPS List 2	San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, City of Encinitas.	N/A
Ambrosia Pumilla	San Diego ambrosia	CNPS List 1B FE	N/A	Closest recorded occurrence of this species is 2.5 mi east of I-5 along State Route 76 (SR-76).
Arctostaphylos glandulosa ssp. crassifolia	Del Mar Manzanita	CNPS List 1B FE	South and east of 21b-Del Mar Tunnel- I-5/Peñasquitos alignment, in the City of San Diego.	Approx. 70 plants were observed at the top of the slopes on both sides of I-5, just north of Del Mar Heights Road to Birmingham Drive.
Atriplex pacifica Nelson	South coast saltscale	CNPS List 1B	N/A	Approx. 100 individuals were observed along a dirt road northwest of the I-5 Manchester interchange.
Baccharis vanessae Beauchamp	Encinitas baccharis	CNPS List 1B FT, SE	N/A	Closest known occurrence is approx. 1,230 ft east of the I-5 near Encinitas Blvd.
Brodiaea filifolia	thread-leaved brodiaea	CNPS List 1B FT, SE	N/A	Closest known location is approx. 1.86 mi east of I-5 near SR-78.
Brodiaea orcuttii	Orcutt's brodiaea	CNPS List 1B	East of the 35-Poinsettia Runs-Through rail track, south of Poinsettia Station, in the City of Carlsbad.	N/A
Ceanothus cyaneus	Lakeside ceanothus	CNPS List 1B	Potentially occurs in study area in City of Del Mar.	N/A
Ceanothus verrucosus	Wart-stemmed ceanothus	CNPS List 2	San Dieguito Lagoon, east of Jimmy Durante Blvd, and north and east of 21b-Del Mar Tunnel- I-5/Penasquitos alignment, in the cities of Del Mar and San Diego.	Occurs northeast of the I-5 Del Mar Heights Road interchange in San Diego, and east of the I-5 Birmingham Avenue interchange in Encinitas
Centromadia parryi spp. australis	Southern tarplant	CNPS List 1B	N/A	Occurs along the dirt access road east of I-5 and north of the San Dieguito River.
Centromadia pungens ssp. laevis	Smooth tarplant	CNPS List 1B	Potentially occurs in study area near Camp Pendleton/City of Oceanside boundary.	N/A
Chaenactis Glabriuscula var. orcuttiana	Orcutt's pincushion	CNPS List 1B	Potentially occurs in study area in the cities of Encinitas and Carlsbad.	Approx. 4,700 individuals were observed within the study area around San Elijo Lagoon on both sides of I-5.

Status Key

CNPS:	California Native Plant Society	SE:	State-listed as endangered
FE:	Federally-listed as endangered	ST:	State-listed as threatened
FT:	Federally-listed as threatened	SR:	State-listed as rare

TABLE 5.5-2: SPECIAL-STATUS PLANT SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Special Status	Corridor Location	
			Rail	Highway
Chorizanthe orcuttiana	Orcutt's spineflower	CNPS List 1B FE, SE	Southwest of Los Peñasquitos Lagoon in the City of San Diego, and west of the 21a-Del Mar Tunnel-Camino Del Mar alignment, in the City of Del Mar.	N/A
Orcuttia californica	California orcutt grass	CNPS List 1B FE, SE	East of the 35-Poinsettia Runs-Through rail track, south of Poinsettia Station, City of Carlsbad.	N/A
Comarostaphylis diversiloba ssp. diversiloba	Summer holly	CNPS List 1B	Northern border of San Elijo Lagoon in the City of Encinitas, and south of the 21b-Del Mar Tunnel- I-5/Peñasquitos alignment in the City of San Diego.	South of San Elijo Lagoon on the southbound slopes of I-5.
Coreopsis maritime	Sea dahlia	CNPS List 2	Southwest of Batiquitos Lagoon and west of the 10-CP Ponto to CP Moonlight double track, City of Carlsbad.	Approx. 389 individual plants were observed in the study area primarily north of Manchester Avenue on both sides of I-5.
Corethrogyne filaginifolia var. llinifolia	Del Mar sand aster	CNPS List 1B	Multiple locations within the cities of San Diego, Encinitas and Carlsbad around Batiquitos Lagoon.	Over 2,000 individuals were observed within the study area between Del Mar Heights Road and Birmingham Avenue along the upper slopes on both sides of I-5.
Corethrogyne filaginifolia var. incana	San Diego sand aster	CNPS List 1B	Northern border of San Elijo Lagoon in the City of Encinitas.	N/A
Dichondra occidentalis	Western dichondra	CNPS List 4	Aqua Hedionda Lagoon, east of 8-Carlsbad Double Track, City of Carlsbad; and near the Encinitas Pedestrian Crossing at Santa Fe Dr, City of Encinitas.	N/A
Dudleya brevifolia	Short-leaved dudleya	CNPS List 1B SE	East of 19-Del Mar Bluffs Stabilization Phase 3 and west of 21a-Del Mar Tunnel-Camino Del Mar alignment, City of Del Mar.	N/A
Dudleya viscida	Sticky dudleya	CNPS List 1B	Near San Luis Rey River north of the 3-CP Eastbrook to CP Shell rail, City of Oceanside.	N/A
Eryngium aristulatum var. parishii	San Diego button celery	CNPS List 1B FE, SE	East of the 35-Poinsettia Run-Through rail track, near Poinsettia Station, City of Carlsbad.	Camp Pendleton, Carlsbad, San Marcos, Miramar Naval Air Station, Clairemont Mesa, and Otay Mesa. *No vernal pools in study area, so not expected to occur within project limits.*

Status Key

CNPS:	California Native Plant Society	SE:	State-listed as endangered
FE:	Federally-listed as endangered	ST:	State-listed as threatened
FT:	Federally-listed as threatened	SR:	State-listed as rare

TABLE 5.5-2: SPECIAL-STATUS PLANT SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Special Status	Corridor Location	
			Rail	Highway
Euphorbia misera	Cliff spurge	CNPS List 2	Aqua Hedionda Lagoon, east of the 8-Carlsbad Double Track rail, City of Carlsbad.	N/A
Ferocactus viridescens	Coast barrel cactus	CNPS List 2	South and east of 21b- Del Mar Tunnel- I-5/Peñasquitos alignment, in the City of San Diego.	Found on slopes northwest of the I-5/Genesee interchange, on the slopes on both sides of I-5 near San Elijo Lagoon, and west of I-5 on the northern slopes of Batiquitos Lagoon.
Harpagonella palmeri	Palmer's grappling hook	CNPS List 2	San Elijo Lagoon, east of 15-CP Cardiff to CP Craven rail, City of Encinitas.	N/A
Lotus nuttallianus	Nuttall's lotus	CNPS List 1B	San Luis Rey River and near Oceanside Harbor in the City of Oceanside; south and west of Batiquitos Lagoon in the City of Carlsbad; and within San Elijo Lagoon in the City of Encinitas.	N/A
Myosurus minimus ssp. apus	Little mousetail	CNPS List 3	East of 35-Poinsettia Runs-Through rail track, south of Poinsettia Station, City of Carlsbad.	N/A
Navarretia fossalis	Moran/Spreading navarretia	CNPS List 1B FT	N/A	Occurred in relatively few of the San Diego County vernal pools. Found in Carlsbad, San Marcos, Ramona, and Otay Mesa. *Not expected to occur in the study area due to lack of suitable habitat.*
Pinus torreyana ssp. Torreyana	Pinaceae (Torrey Pine)	CNPS List 1B	West of I-5, north and south of the 21b- Del Mar Tunnel- I-5/Peñasquitos alignment, City of San Diego.	Planted Torrey pines along much of the I-5. Some near San Elijo Lagoon may be native occurrences.
Quercus dumosa	Nuttall's scrub oak	CNPS List 1B	Potential to occur within study area as part of the Miramar Tunnel alignment.	Observed at the top of the north and southbound slopes, just north of Del Mar Heights Road and on the upper slopes near San Elijo Lagoon.
Suaeda esteroa	Estuary seablite	CNPS List 1B	San Dieguito and Batiquitos Lagoon.	High salt marsh around San Dieguito, Batiquitos, and Agua Hedionda Lagoons.

Status Key

CNPS: California Native Plant Society
FE: Federally-listed as endangered
FT: Federally-listed as threatened
SE: State-listed as endangered
ST: State-listed as threatened
SR: State-listed as rare

TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Accipiter striatus	Sharp-shinned hawk	SSC	N/A	Observed during general wildlife surveys.
Accipiter cooperii	Cooper's hawk	SSC	Observed east of I-5 and 21b- Del Mar Tunnel- I-5/Peñasquitos alignment, on the Dean Family Trust property, City of San Diego.	Observed during general wildlife surveys.
Aechmophorus occidentalis	Western grebe	Not Listed	Observed south of the Buena Vista Lagoon outlet to the Pacific Ocean in the City of Carlsbad.	N/A
Agelaius tricolor	Tricolored blackbird	SSC	Observed within San Dieguito Lagoon in the City of San Diego, near its border with the City of Del Mar.	N/A
Aimophila ruficeps canescens	Rufous-crowned sparrow	SSC	Observed east of the 21b- Del Mar Tunnel- I-5/Peñasquitos alignment in the City of San Diego.	Observed during general wildlife surveys at San Dieguito Lagoon.
Ardea herodias	Great blue heron	SSC	Observed within San Luis Rey River in the City of Oceanside, and within San Dieguito Lagoon at the City of Del Mar/San Diego border.	Observed in lagoons during general wildlife surveys. Some nesting habitat may be present at San Elijo Lagoon.
Asio otus	Long-eared owl	SSC	Observed within San Elijo Lagoon, east of 15-CP Cardiff to CP Craven rail, City of Encinitas.	N/A
Branchinecta sandiegonensis	San Diego fairy shrimp	FE	Observed east of the 35-Poinsettia Runs-Through rail track near Poinsettia Station, and near Palomar Airport Road, City of Carlsbad.	N/A
Branta canadensis ssp. Moffitti	Canada goose	Not Listed	Observed within San Dieguito Lagoon, north of the 21b-Del Mar Tunnel- I-5 Penasquitos alignment, with I-5 to the east and Jimmy Durante Blvd to the west, in the City of San Diego.	N/A
Butorides virescens	Green heron	Not Listed	Observed within San Dieguito Lagoon at the City of San Diego and City of Del Mar border.	N/A
Campylorhynchus brunneicapillus couesi	Coastal cactus wren	SSC	Observed east of I-5 and 21b- Del Mar Tunnel- I-5/Peñasquitos alignment, on the Dean Family Trust property, City of San Diego.	N/A

Status Key

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SSC: State of California (CDFG) Species of Concern
BLM: Bureau of Land Management Sensitive Species

TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Casmerodius albus	Great egret	SSC	N/A	Observed in and around lagoons and associated upland habitat during general wildlife surveys.
Cathartes aura	Turkey vulture	Not Listed	Observed west of the 17-San Dieguito Bridge/Double Track, near the San Dieguito River outlet to the Pacific Ocean, in the City of Del Mar.	N/A
Charadrius alexandrinus nivosus	Western snowy plover	FT, SSC	Observed near outlet of Batiquitos Lagoon to Pacific Ocean, west of the rail track, in the City of Carlsbad, and within the northwestern portion of Los Peñasquitos Lagoon, east and west of the rail corridor, in the City of San Diego.	Known to occur in some of the coastal lagoons; however, no nesting area within the project footprint. Some foraging habitat may be impacted at Batiquitos and Agua Hedionda Lagoons.
Chen caerulescens	Snow goose	Not Listed	Observed within San Dieguito Lagoon, northeast of the 21b-Del Mar Tunnel- I-5 Penasquitos alignment, with I-5 to the east and Jimmy Durante Blvd to the west, in the City of San Diego.	N/A
Circus cyaneus	Northern harrier	SSC	Observed near San Luis Rey River in the City of Oceanside, near the southwestern border of the San Dieguito River, and adjacent to the 21b-Del Mar Tunnel- I-5/Peñasquitos in the City of Del Mar.	Observed at San Dieguito Lagoon.
Cnemidophorus hyperythrus	Orange-throated whiptail	SSC, SP	Observed northeast of the northern terminus of Los Peñasquitos Lagoon in the City of Del Mar, and east of I-5 and 21b- Del Mar Tunnel- I-5/Peñasquitos alignment, on the Dean Family Trust property, in the City of San Diego.	Observed during general wildlife surveys in coastal sage scrub.
Dendroica petechia	Yellow warbler	SSC	Observed within San Luis Rey River Southern Coastal Salt Marsh between rail and highway corridors, City of Oceanside, and within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, City of Encinitas.	Observed during general wildlife surveys in riparian areas.
Egretta rufescens	Reddish egret	Not Listed	Observed within San Dieguito Lagoon near City of San Diego and City of Del Mar border.	Observed in and around lagoons and associated upland habitats during general wildlife surveys.

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TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Elanus leucurus majusculus	White-tailed kite	FP, SSC	Observed in San Dieguito Lagoon.	Observed foraging within the study area, generally over agricultural fields and at San Dieguito and San Elijo Lagoons during general wildlife surveys. No nest sites were observed.
Elanus axillaris	Black-shouldered kite	Not Listed	Observed on the Del Mar Fairgrounds, east of the 17-San Dieguito Bridge/Double Track, in the City of Del Mar, and potentially within Carlsbad and Oceanside.	N/A
Empidonax traillii extrimus	Southwestern willow flycatcher	FE, SE	Observed within and near San Luis Rey River in the City of Oceanside.	Surveys within the San Luis Rey River riparian habitat did not detect the flycatcher. San Elijo Lagoon Conservancy has records of migrant flycatchers at the Lagoon outside the study area.
Eremophila alpestris actia	California horned lark	SSC	Observed within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas, and within San Dieguito River in the City of San Diego.	Present on revegetating slopes of the new Auxiliary lane on the northbound side of I-5, south of San Dieguito River.
Eucyclogobius newberryi	Tidewater goby	FE, SSC	Potentially occurs in study area in San Luis Rey River, Buena Vista and Agua Hedionda Lagoon.	Recorded in San Mateo Creek, San Onofre Creek, Las Pulgas Creek, Aqua Hedionda, and Buena Vista Lagoons. None observed during fisheries surveys at San Elijo, Batiquitos, and Agua Hedionda Lagoons. Greatest potential is within Agua Hedionda Lagoon.
Eumeces skiltonianus interparietalis	Coronado Island skink	SSC	Potentially occurs in study area south of Los Peñasquitos Lagoon.	At least one individual observed near the 5/805 merge. Others potentially throughout the study area.
Falco peregrinus	Peregrine falcon	SE	Observed near the Encinitas Pedestrian Crossing at Montgomery in the City of Encinitas; and within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas.	N/A

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TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Felis concolor	Mountain lion	CFP	Observed south of Los Penasquitos Lagoon, west of the rail corridor, in the City of San Diego.	N/A
Ixobrychus exilis	Least bittern	SSC	N/A	Observed in the drainage parallel to I-5 near San Dieguito Lagoon, and in general wildlife surveys near San Elijo Lagoon..
Lanius ludovicianus	Loggerhead shrike	FSC, SSC	Observed within San Dieguito Lagoon in the City of San Diego, west of the I-5, northeast of the 21b-Del Mar Tunnel- I-5 Peñasquitos alignment.	Observed at the Racetrack View Mitigation Site west of I-5. High probability to occur in other areas based on historical location data and presence of suitable habitat within the study area.
Larus californicus	California gull	SSC	Observed within southern portion of the San Dieguito River in the City of Del Mar, near its border with the City of San Diego.	N/A
Neotoma lepida intermedia	San Diego desert woodrat	SSC	Potentially occurs in study area in the City of Del Mar.	Captured during trapping studies south of San Dieguito Lagoon.
Numenius americanus	Long-billed curlew	SSC	Observed within San Dieguito Lagoon in the City of Del Mar, near its border with the City of San Diego.	Observed during general wildlife surveys feeding in mudflats within the lagoons.
Nycticorax nycticorax	Black-crowned night heron	BLM Sensitive Special Animal	Observed within the San Luis Rey River, east of 3-CP Eastbrook to CP Shell rail, City of Oceanside; and within San Dieguito Lagoon near the border of the City of San Diego and City of Del Mar.	N/A
Odocoileus hemionus fuliginata	Southern mule deer	Not Listed	Observed within and south of Los Penasquitos Lagoon in the City of San Diego; and east of the 21b- Del Mar Tunnel-I-5/Penasquitos alignment, in the City of San Diego Torrey Hills Community Plan Area.	N/A
Oncorhynchus mykiss irideus	Southern Steelhead Trout – Southern ESU	FE, SSC	N/A	In May 2007, a steelhead trout was reported by CDFG personnel in the lower San Luis Rey River.
Pandion haliaetus	Osprey	SSC	N/A	Observed at Batiquitos and San Dieguito Lagoons.

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TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Panoquina panoquin	Salt marsh skipper	Not Listed	Observed near the San Dieguito River east of Jimmy Durante Blvd, in the City of Del Mar.	N/A
Passerculus sandwichensis beldingi	Belding's savannah sparrow	SE	Observed within Los Peñasquitos Lagoon east of the 22b-Peñasquitos Double Track and west of the 21b- Del Mar Tunnel- I-5/Peñasquitos alignment in the City of San Diego, north of San Dieguito River in the City of Del Mar, and within San Dieguito Lagoon near the City of Del Mar/San Diego border.	In 2005, sparrows were found in San Dieguito, San Elijo, Batiquitos, and Buena Vista Lagoons. In 2006, additional surveys completed at San Dieguito identified more sparrows in the northeastern portion of the study area.
Pelecanus erythrorhynchos	American white pelican	SSC	Observed within Buena Vista Lagoon in the City of Carlsbad; and within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas.	Observed in San Elijo, Batiquitos, and Buena Vista Lagoons during general wildlife surveys.
Pelecanus occidentalis ssp. californicus	California brown-pelican	FE, SE	Observed at the southwestern edge of Buena Vista Lagoon and within Batiquitos Lagoon in the City of Carlsbad; and within San Dieguito Lagoon in the City of Del Mar, near its border with the City of San Diego.	California brown pelicans were observed foraging and resting within the project study area lagoons.
Perognathus fallax fallax	Northwestern San Diego pocket mouse	SSC	Potentially occurs in study area in Los Peñasquitos Lagoon.	Captured during trapping studies on the slopes south of San Dieguito Lagoon, and around San Elijo Lagoon.
Perognathus longimembris pacificus	Pacific pocket mouse	FE, SSC	Observed south of the 21b-Del Mar Tunnel- I-5/Peñasquitos alignment and north of the alignment near the San Dieguito River in the City of San Diego.	In San Diego County, found in open patches of ground surrounded by weeds as well as sandy soils within coastal sage scrub habitat. *Based on protocol live-trapping results, no pocket mice are expected to occur within the project area..*
Phalacrocorax auritus	Double-crested cormorant	SSC	Observed near Buena Vista Lagoon in the City of Carlsbad; within San Dieguito Lagoon in the City of Del Mar, near its border with the City of San Diego; and within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas.	Observed foraging in lagoons during general wildlife surveys.

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TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Phrynosoma coronatum blainvillei	San Diego horned lizard	SSC	N/A	At least one individual caught near Del Mar Heights Road during small mammal trapping. More likely to occur within the study area.
Picoides pubescens	Downey woodpecker	Not Listed	Observed within San Luis Rey River area in the City of Oceanside, north of the 3-CP Eastbrook to CP Shell rail; and within San Dieguito Lagoon in the City of San Diego, near its border with the City of Del Mar.	N/A
Plegadis chihi	White-face ibis	SSC	Observed within San Dieguito Lagoon in the City of San Diego, near its border with the City of Del Mar.	N/A
Polioptila californica californica	Coastal California gnatcatcher	FT, SSC	Observed near the Los Peñasquitos Lagoon and Sorrento Valley Bridge Replacement in the cities of Del Mar and San Diego, and east of the 21b- Del Mar Tunnel- I-5/Peñasquitos alignment, on the Dean Family Trust property in the City of San Diego.	Found along the fill slopes of a few cut slopes adjacent to the lagoons and in a few adjacent canyons with coastal sage scrub habitat.
Progne subis	Purple martin	SSC	Observed within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas.	N/A
Rallus longirostris levipes	Light-footed clapper rail	CFP FE, SE	Observed near Buena Vista Lagoon in the City of Oceanside and City of Carlsbad, within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas, and within Los Peñasquitos Lagoon, east of the 22b- Peñasquitos Double Track and west 21b- Del Mar Tunnel- I-5/Peñasquitos alignment in the City of San Diego.	Detected within 500 ft of I-5 in Buena Vista and San Elijo Lagoons. Detected south of the survey area. Observed adjacent to the park and ride at La Costa and on the north shore of Batiquitos Lagoon.
Rana draytonii	California red-legged frog	FT	Observed east of the rail corridor, near Loma Alta Creek in the City of Oceanside.	N/A
Recurvirostra americana	American avocet	Not Listed	Observed within the southern portion of San Dieguito River at the border of the City of San Diego and the City of Del Mar.	N/A
Riparia riparia	Bank swallow	ST	Observed within San Elijo Lagoon, east of the 15-CP Cardiff to CP Craven rail, in the City of Encinitas.	N/A

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TABLE 5.5-3: SPECIAL-STATUS WILDLIFE SPECIES (LOSSAN RAIL AND I-5 HIGHWAY STUDY AREA) (CONTINUED)

Scientific Name	Common Name	Federal/State Status	Corridor Location	
			Rail	Highway
Rynchops niger	Black skimmer	SSC	Observed within San Dieguito Lagoon in the City of San Diego, near its border with the City of Del Mar.	N/A
Sterna antillarum browni	California least tern	CFP FE, SE	Observed south and west of Batiquitos Lagoon in the City of Carlsbad, within San Luis Rey River in the City of Oceanside, within San Dieguito Lagoon at the City of Del Mar; and, west of the 17-San Dieguito Bridge/Double Track, near the Del Mar Fairgrounds Platform, in the City of Del Mar.	Known nesting areas in San Elijo and Batiquitos Lagoons. Observed foraging in San Elijo and Batiquitos Lagoon within the Study Area in 2003.
Sterna elegans	Elegant tern	SSC	Observed within San Dieguito Lagoon in the City of Del Mar, near its border with the City of San Diego.	N/A
Streptocephalus woottoni	Riverside fairy shrimp	FE	Observed east of the 35-Poinsettia Runs-Through rail track in the City of Carlsbad.	N/A
Thamnophis hammondii	Two-striped garter snake	SSC	N/A	Observed during general wildlife surveys near San Dieguito River.
Vireo bellii pusillus	Least Bell's vireo	FE, SE	Observed south of Los Peñasquitos Lagoon in the City of San Diego, north of San Elijo Lagoon, and west of the rail in the City of Carlsbad.	Two vireo territories were detected in the willow woodland east of I-5 near the San Dieguito River outside the study area. They were also detected in Oceanside in small patches of riparian habitat near the I-5.

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SanGIS Special Species Sightings

- Sensitive Sighting Location

AC = California adolphia
AG = Del Mar manzanita
AM = Coastal scrub acacia
AR = San Diego sagewort
AS = Shaw's agave
BO = Orcutt's brodiaea
CL = Del Mar sand aster
CN = San Diego sand aster
CO = Orcutt's spineflower
CV = Wart-stemmed ceanothus
DB = Short-leaved dudleya
DO = Western dichondra
DU = Sticky dudleya
EA = San Diego button celery
FV = Coast barrel cactus
HP = Palmer's grappling hook
IH = San Diego marsh-elder
JA = Southwestern spiny rush
LN = Nuttall's lotus
NF = Prostrate navarretia
OC = California orcutt grass
PT = Torrey pine
QD = Nuttall's scrub oak
SC = Ashy spike-moss
SD = San Diego sea dahlia
SY = Summer holly

CA Department of Fish and Game

CNDDB Specific Resource

1 = Del Mar sand aster
2 = Del Mar manzanita
3 = Nuttall's lotus
4 = Nuttall's scrub oak
5 = Orcutt's spineflower
6 = Coast barrel cactus
7 = San Diego sand aster
8 = Southern Coastal Salt Marsh
9 = Southern Maritime Chaparral
10 = Southern Riparian Forest
11 = sea dahlia
12 = short-leaved dudleya
13 = snake cholla
14 = summer holly
15 = woven-spored lichen

Caltrans (I-5 Study Area)

Sensitive Plants

AC = California adolphia
CB = Coast barrel cactus
DM = Del Mar manzanita
NSO = Nuttall's scrub oak
OP = Orcutt's pincushion
SA = Del Mar sand aster
SCS = South coast saltscale
SD = Sea dahlia
ST = Southern tarplant
TP = Torrey pine
WC = Wart-Stemmed ceanothus

- California adolphia
- Coast barrel cactus
- Del Mar Manzanita
- Del Mar sand aster
- Nuttall's scrub oak
- Orcutt's pincushion
- Sea dahila
- South coast saltscale
- Summer holly
- Torrey pine
- Wart-Stemmed ceanothus

Caltrans (I-5 Study Area)

Sensitive Vegetation

Sensitive Upland Vegetation
Sensitive Wetland Vegetation

AS = Arundo Scrub
BSS = Black Sage Scrub
CBM = Coastal Brackish Marsh
CBS = Coastal Bluff Scrub
CLOW = Coast Live Oak Woodland
CSS = Coastal Sage Scrub
CSS/CHP = Coastal Sage Scrub/Chaparral
DD = Drainage Ditch (Concrete)
DW = Disturbed Wetland
FWM = Freshwater Marsh
MF = Mud Flat
MFS = Mule Fat Scrub
MSS = Maritime Succulent Scrub
NG = Native Grassland
NNG = Non-native Grassland
OW = Open Water
SAWW = Southern Arroyo Willow Woodland
SBS = Salt Bush Scrub
SF = Salt Flat
SM = Southern Coastal Salt Marsh
SMC = Southern Maritime Chaparral
SMT = Salt Marsh Transition
SWS = Southern Willow Scrub
SWS/FWM = Southern Willow Scrub/Freshwater Marsh
Sand = Sand - Nesting Area
WUS = Waters of the US
dBSS = Black Sage Scrub (Disturbed)
dCBM = Coastal Brackish Marsh (Disturbed)
dCSS = Coastal Sage Scrub (Disturbed)
dCSS-AM = Coastal Sage Scrub (Disturbed) Already mitigated
dFWM = Freshwater Marsh (Disturbed)
dMFS = Mule Fat Scrub (Disturbed)
dSAWW = Southern Arroyo Willow Woodland (Disturbed)
dSM = Southern Coastal Salt Marsh (Disturbed)
dSMC = Southern Maritime Chaparral (Disturbed)
dSWS = Southern Willow Scrub (Disturbed)

DATA SOURCES: Caltrans. SanGIS, CDFG

FIGURE 5.5-1

Potential ESHA and Special Status Plant Species Legend

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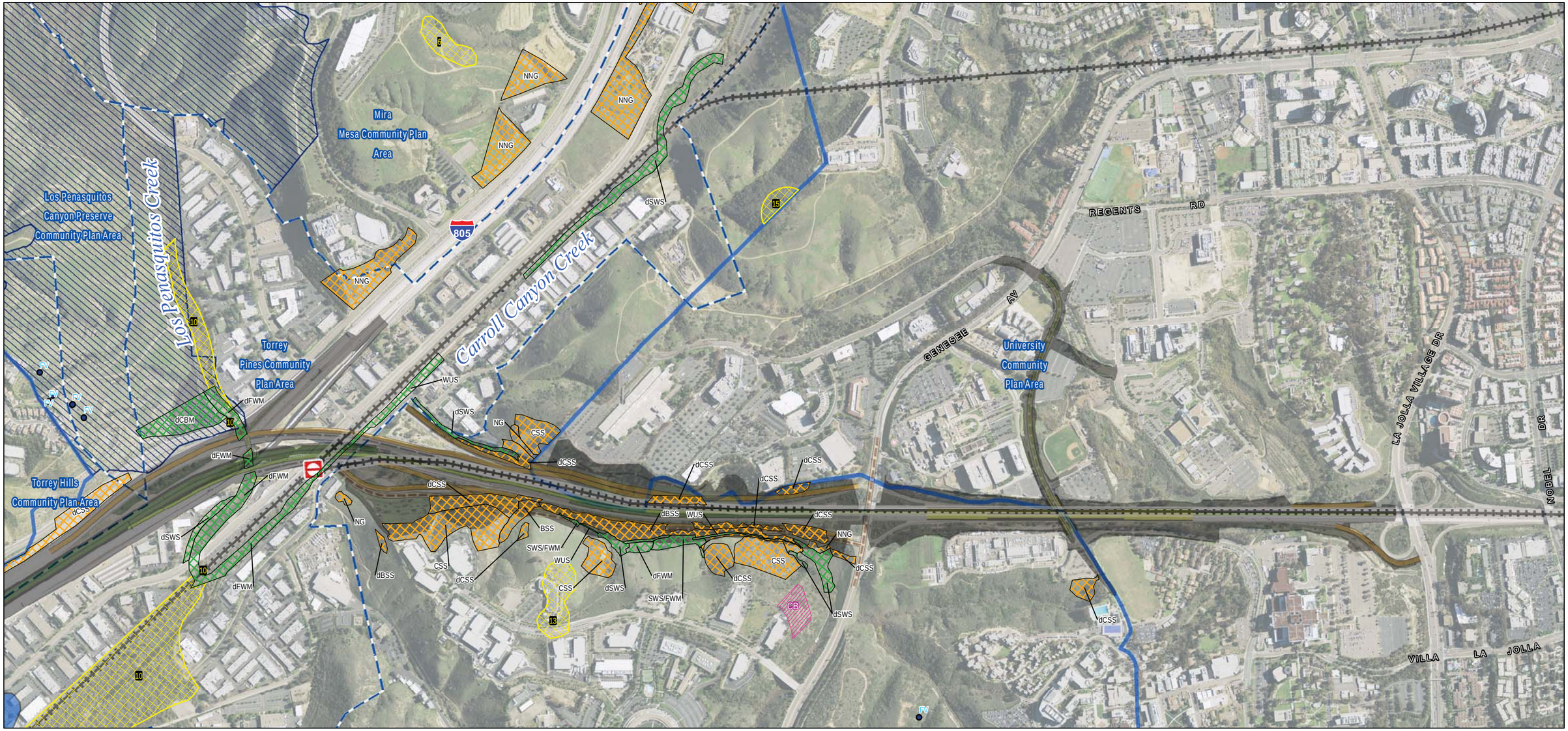

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

Caltrans (I-5 Study Area)
- Sensitive Plants*

*See Legend Page for Sensitive Species and Vegetation Codes

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

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

FIGURE 5.5-1A

Potential ESHA and Special Status Plant Species Detail Map (City of San Diego [South])

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

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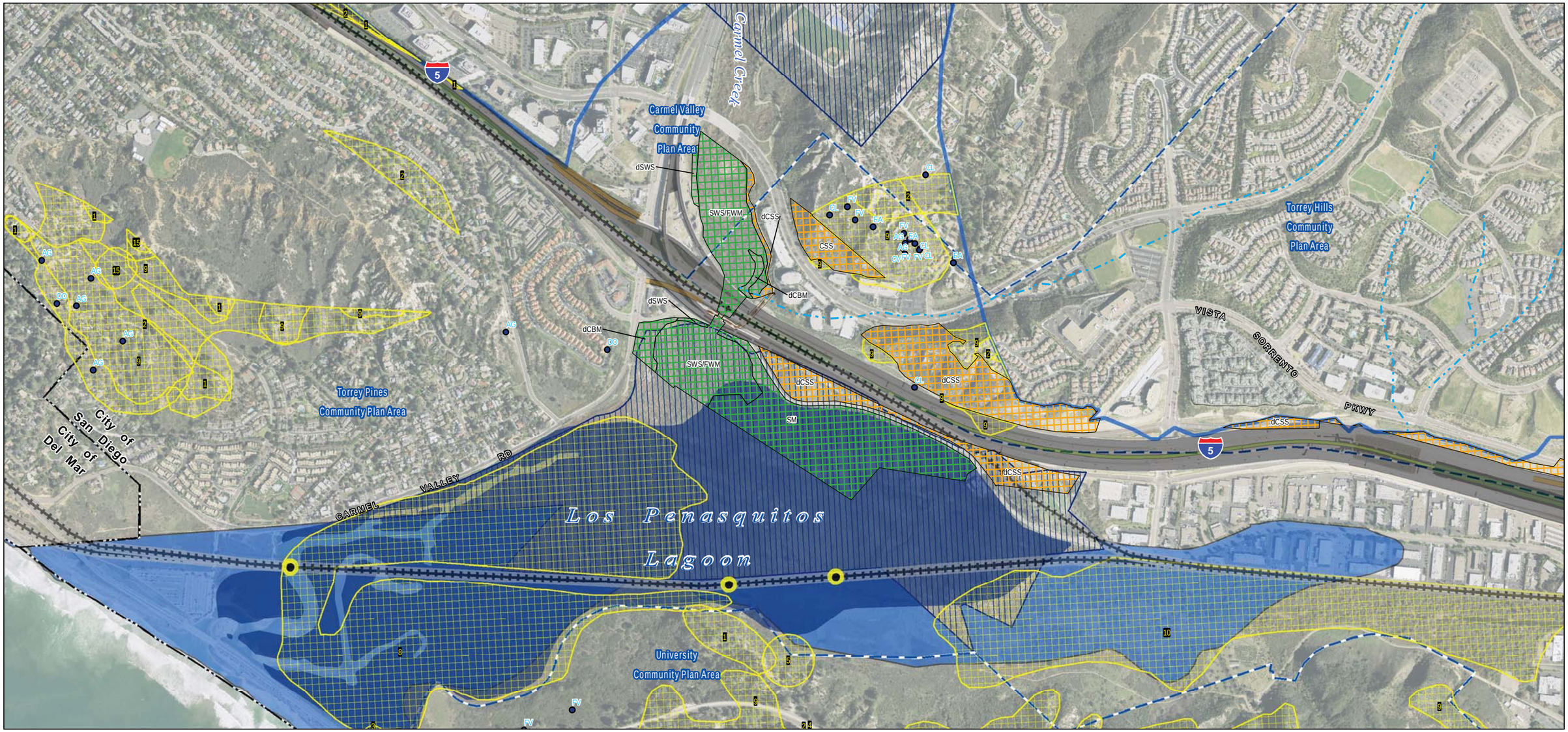


NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

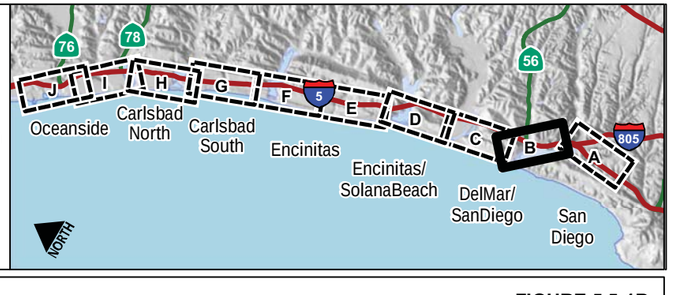
CA Department of Fish and Game
- CNDDB Specific Resource*

Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species and Vegetation Codes



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

FIGURE 5.5-1B

Potential ESHA and Special Status Plant Species Detail Map (City of San Diego [Central])

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

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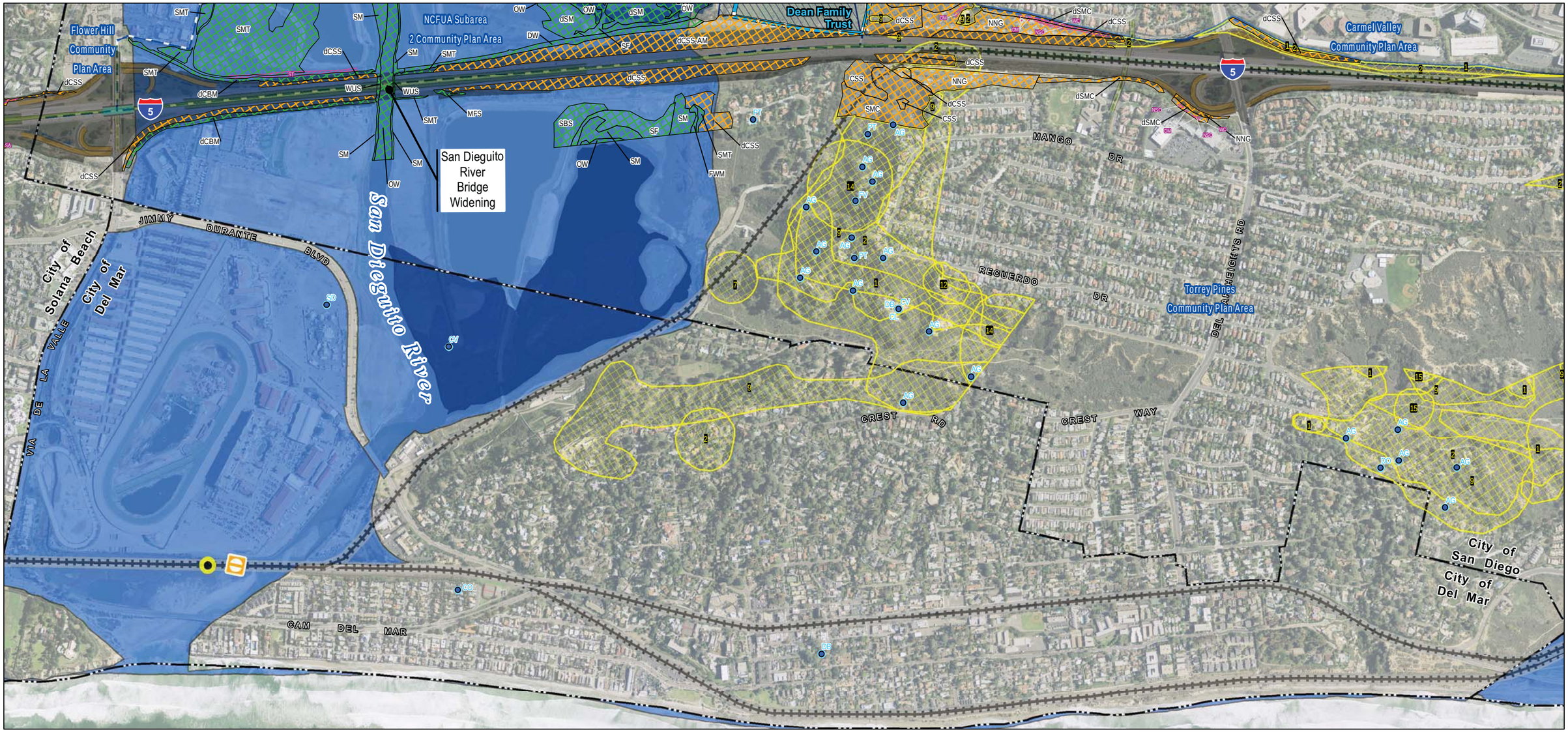

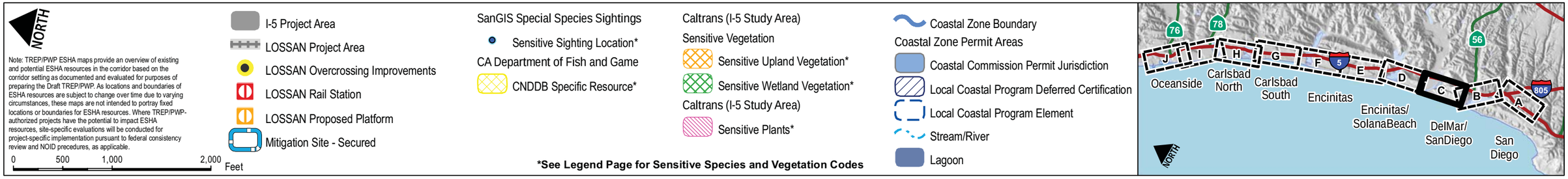

DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, USGS NHD, CNDDB Imagery: DigitalGlobe March 2008

FIGURE 5.5-1C

Potential ESHA and Special Status Plant Species Detail Map (City of Del Mar / San Diego [North])

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

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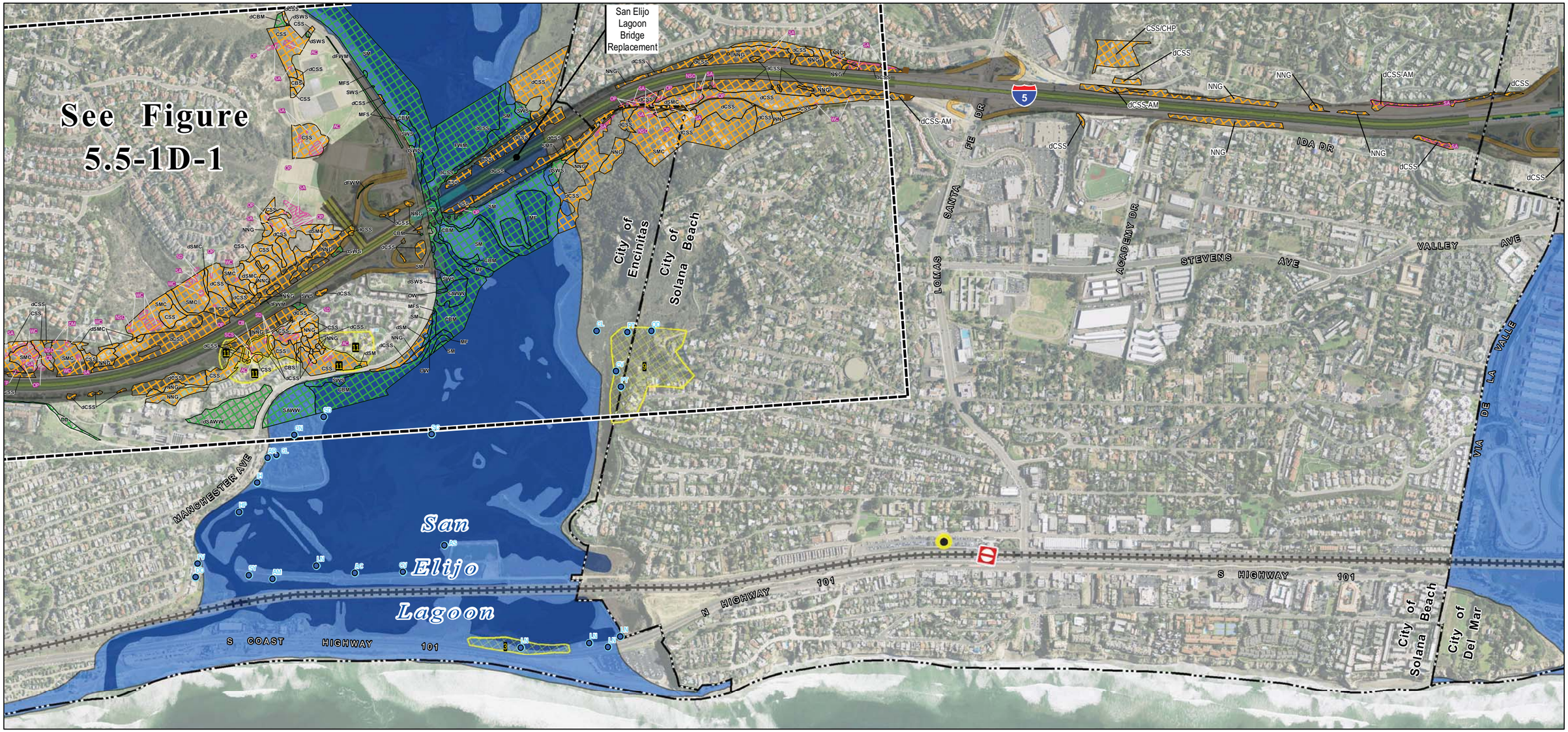


NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

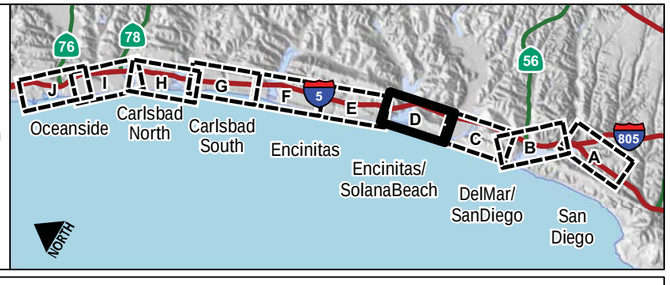
Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

Caltrans (I-5 Study Area)
- Sensitive Plants*
- Del Mar sand aster

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species and Vegetation Codes



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

FIGURE 5.5-1D

Potential ESHA and Special Status Plant Species Detail Map (City of Encinitas [South] / Solana Beach)

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

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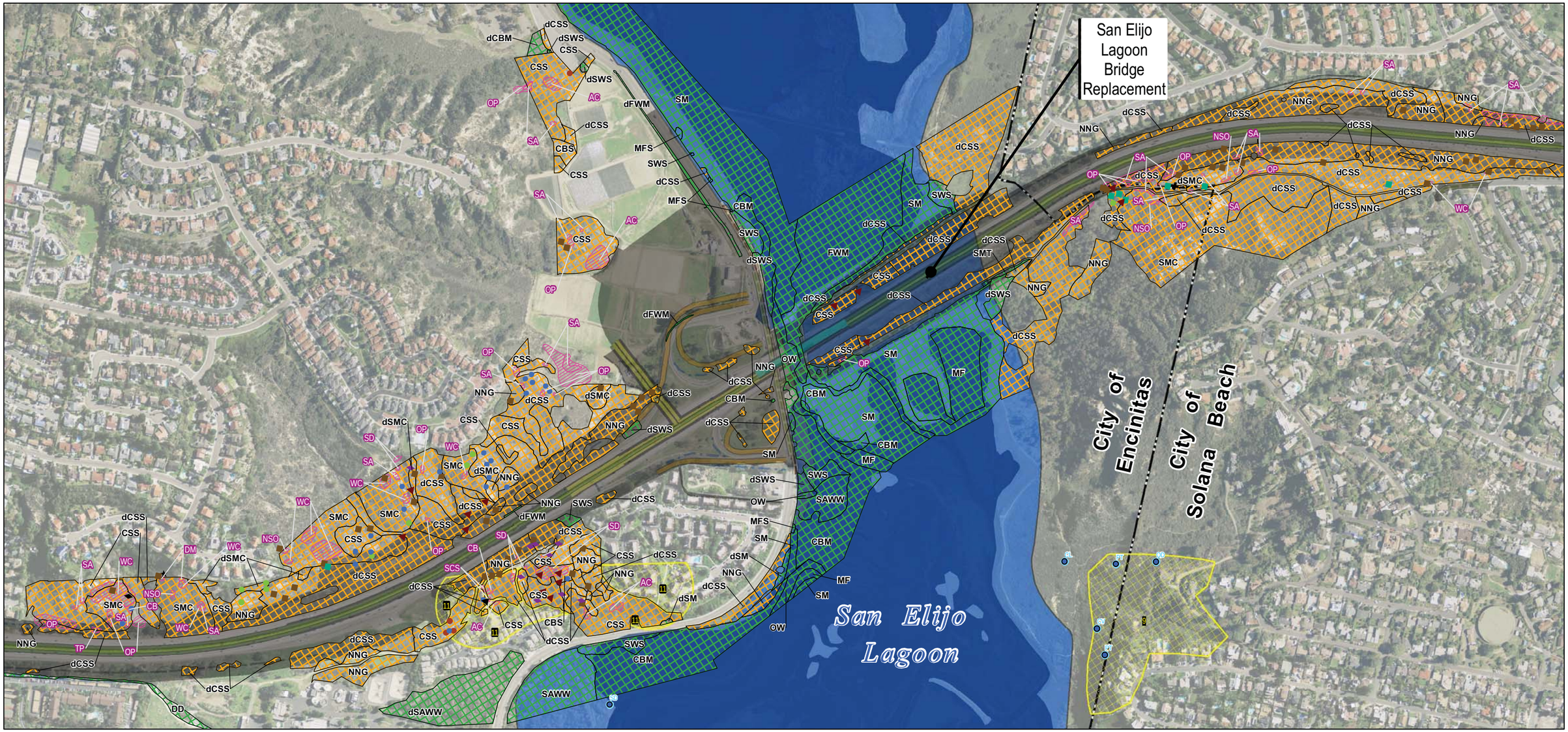

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 300 600 1,200 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

Caltrans (I-5 Study Area)

Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

Caltrans (I-5 Study Area)
- Sensitive Plants*
- California adolphia
- Coast barrel cacuts
- Del Mar Manzanita
- Del Mar sand aster
- Nuttall's scrub oak
- Orcutt's pincushion
- Sea dahila
- South coast saltscale
- Summer holly
- Torrey pine
- Wart-Stemmed ceanothus

*See Legend Page for Sensitive Species and Vegetation Codes

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

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

FIGURE 5.5-1D-1

Potential ESHA and Special Status Plant Species Detail Map (San Elijo Lagoon Inset)

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

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NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

Caltrans (I-5 Study Area)
- Sensitive Plants*
- Wart-Stemmed ceanothus

*See Legend Page for Sensitive Species and Vegetation Codes

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

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

FIGURE 5.5-1E

Potential ESHA and Special Status Plant Species Detail Map (City of Encinitas [Central])

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

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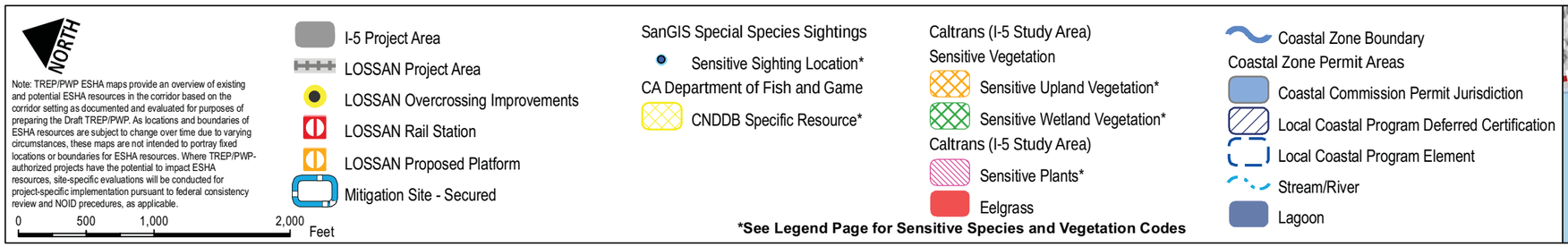

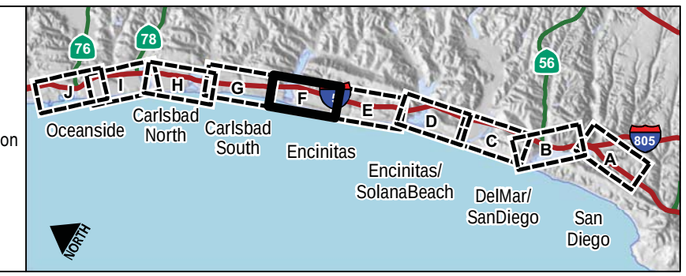

DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, USGS NHD, CNDDB Imagery: DigitalGlobe March 2008

FIGURE 5.5-1F

Potential ESHA and Special Status Plant Species Detail Map (City of Encinitas [North] / City of Carlsbad [South])

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

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NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings

- Sensitive Sighting Location*

Caltrans (I-5 Study Area)

Sensitive Vegetation

- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

US Fish and Wildlife Service

- Spreading Navarretia Critical Habitat

*See Legend Page for Sensitive Species and Vegetation Codes

- Coastal Zone Boundary

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

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

FIGURE 5.5-1G

Potential ESHA and Special Status Plant Species Detail Map (City of Carlsbad [Central])

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

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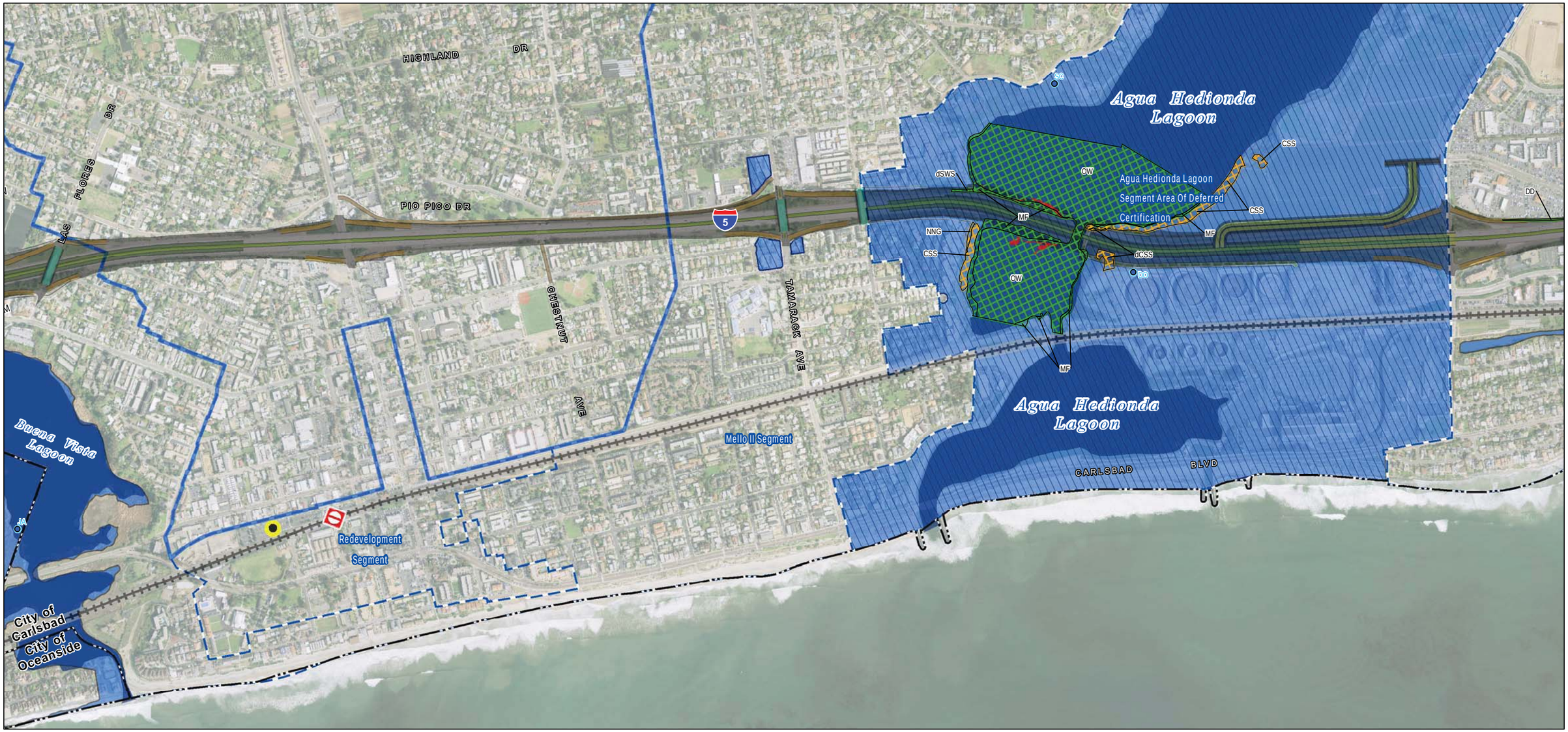

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*
- Eelgrass

Coastal Zone Boundary
Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species and Vegetation Codes

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

FIGURE 5.5-1H

Potential ESHA and Special Status Plant Species Detail Map (City of Carlsbad [North])

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

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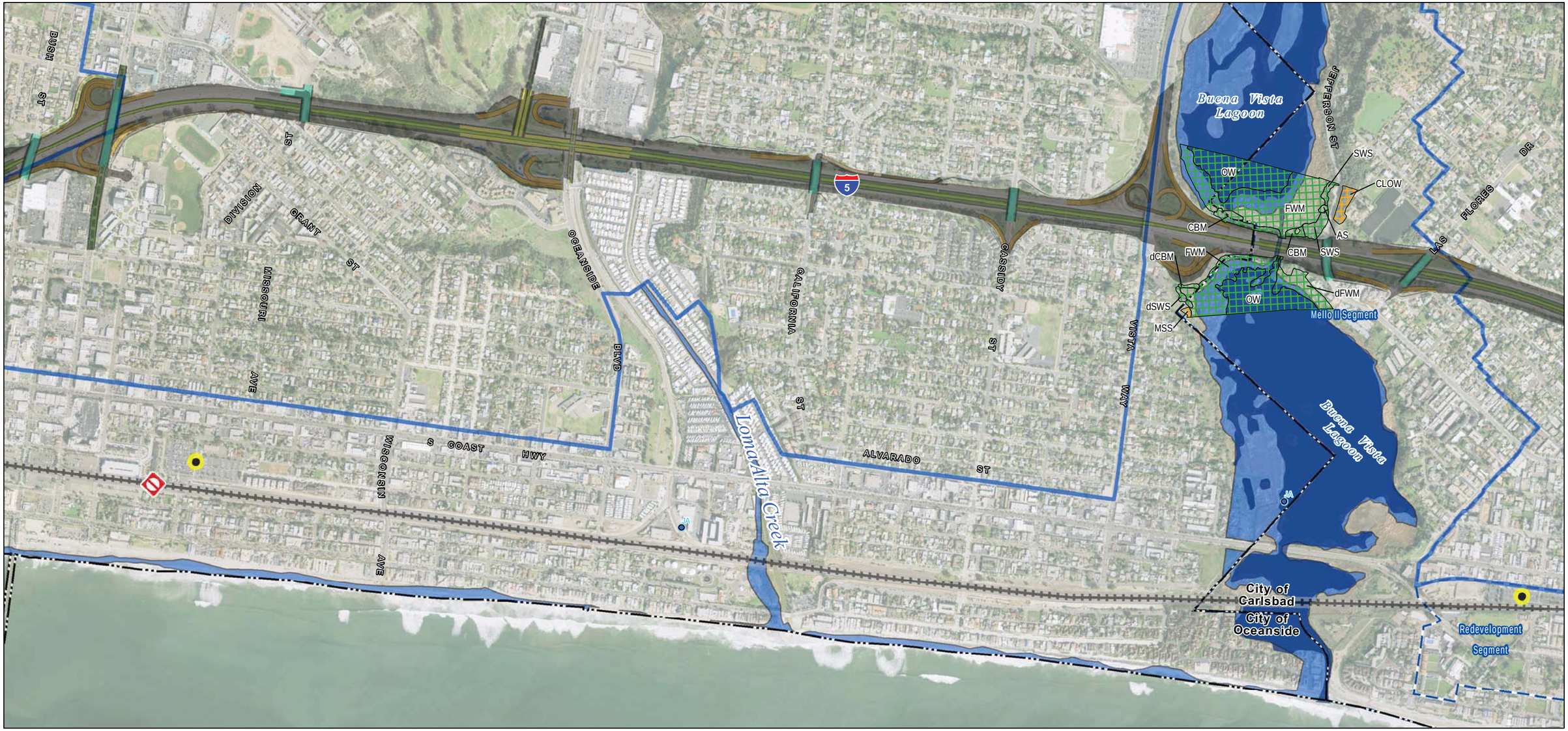

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species and Vegetation Codes

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

FIGURE 5.5-1I

Potential ESHA and Special Status Plant Species Detail Map (City of Oceanside [South])

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

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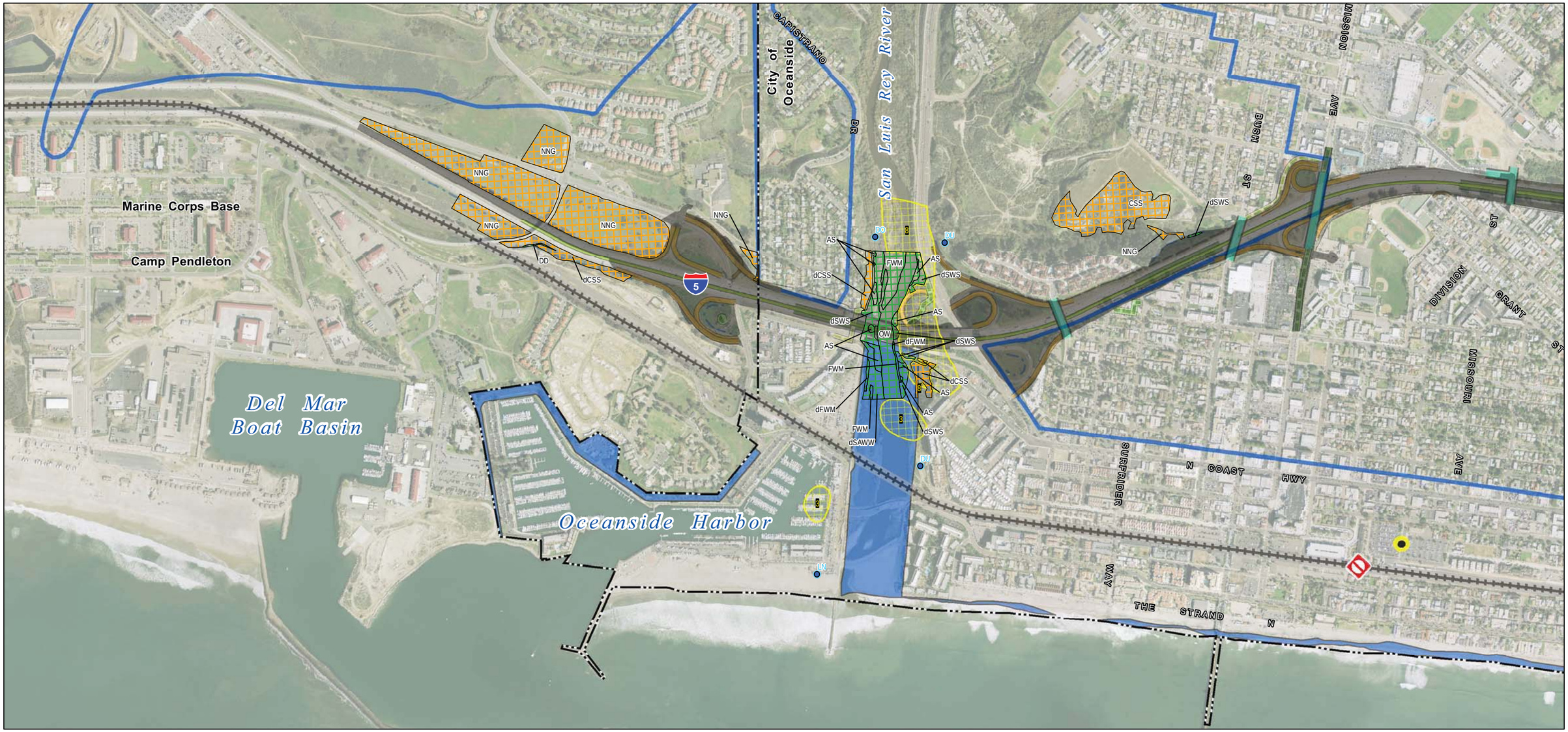

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

Caltrans (I-5 Study Area)
Sensitive Vegetation
- Sensitive Upland Vegetation*
- Sensitive Wetland Vegetation*

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

***See Legend Page for Sensitive Species and Vegetation Codes**

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

FIGURE 5.5-1J

Potential ESHA and Special Status Plant Species Detail Map (City of Oceanside [North])

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

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SanGIS Special Species Sightings

- Sensitive Sighting Location

AV = American avocet
BC = Long-billed curlew
BE = Bald eagle
BH = Great blue heron
BJ = San Diego black-tailed jackrabbit
BK = Black-shouldered kite
BL = Bank swallow
BP = California brown pelican
BS = Belding's savannah sparrow
BT = Black tern
BW = Burrowing owl
CG = Coastal California gnatcatcher
CH = Cooper's hawk
CU = Canada goose
CW = Coastal cactus wren
DL = Double-crested cormorant
DW = Downy woodpecker
ET = Elegant tern
FA = Prairie falcon
FH = Ferruginous hawk
FS = San Diego fairy shrimp
GA = Gadwall
GE = Golden eagle
GH = Green Heron
GU = California gull
HL = San Diego horned lizard
LA = California horned lark
LB = Least Bell's vireo
LH = Loggerhead shrike
LI = Mountain lion
LO = Long-eared owl
LR = Light-footed clapper rail
LT = California least tern
MD = Southern mule deer
MS = Saltmarsh skipper
NE = Black-crowned night heron
NH = Northern harrier
OW = Orange-throated whiptail
PF = Peregrine falcon
PU = Purple martin
RD = Redhead
RE = Reddish egret
RF = California red-legged frog
RP = Rufous-crowned sparrow
RS = Riverside fairy shrimp
SK = Black skimmer
SN = Snow goose
SW = Short-eared owl
TB = Tricolored blackbird
TG = Two-striped garter snake
TV = Turkey vulture
TY = Tidewater goby
VF = Vermilion flycatcher
WB = Western bluebird
WG = Western grebe
WH = White pelican
WI = White-faced ibis
WP = Western snowy plover
WS = Wood stork
WT = Southwestern pond turtle
YC = Yellow-breasted chat
YW = Yellow warbler

CA Department of Fish and Game

CNDDB Specific Resource

16 = San Diego horned lizard
17 = Coronado island skink
18 = Pacific pocket mouse
19 = Riverside fairy shrimp
20 = San Diego ringneck snake
21 = Coastal California gnatcatcher
22 = Coastal western whiptail
23 = Least Bell's vireo
24 = Monarch butterfly
25 = Orange-throated whiptail

Caltrans (I-5 Study Area)

Sensitive Species

- NW San Diego pocket mouse
- Orange-throated whiptail
- Rufous-crowned sparrow
- Belding's savannah sparrow
- Coastal California gnatcatcher
- California least tern
- San Diego desert woodrat
- San Diego horned lizard
- Southwestern willow flycatcher
- Least Bell's vireo
- Least bittern
- Light-footed clapper rail
- San Diego fairy shrimp

US Fish and Wildlife Service

- Coastal California Gnatcatcher Critical Habitat
- Coastal California Gnatcatcher Critical Habitat (Proposed)
- Least Bell's Vireo Critical Habitat
- Riverside Fairy Shrimp Critical Habitat
- San Diego Fairy Shrimp Critical Habitat
- San Diego Fairy Shrimp Critical Habitat (Proposed)
- Southwestern Willow Flycatcher Critical Habitat
- Western Snowy Plover Critical Habitat

DATA SOURCES: Caltrans. SanGIS, CDFG

FIGURE 5.5-2

Potential ESHA and Special Status Wildlife Species Legend

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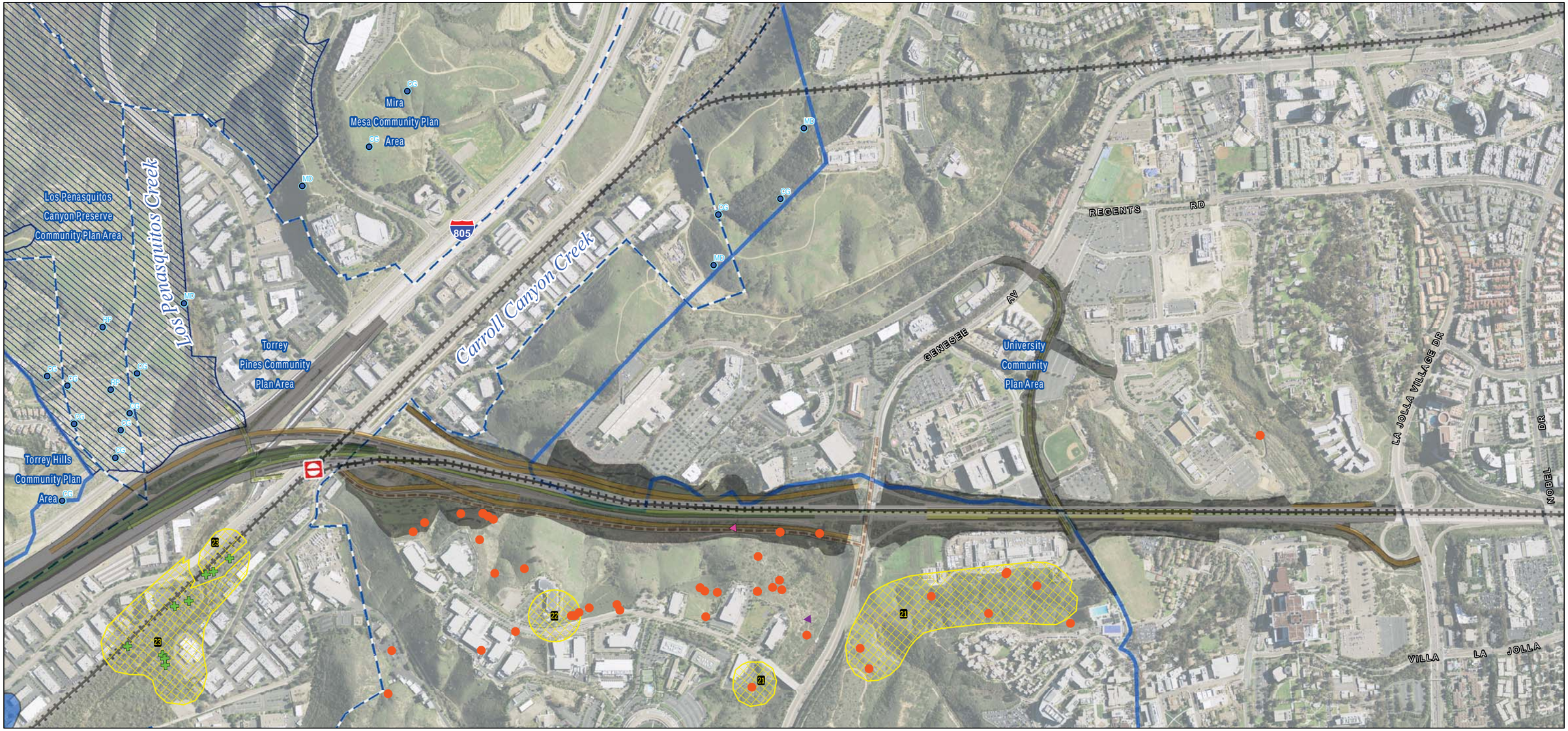

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

Caltrans (I-5 Study Area)
Sensitive Species
- Orange-throated whiptail
- Rufous-crowned sparrow
- California gnatcatcher
- Least Bell's vireo

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species Codes

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

FIGURE 5.5-2A

Potential ESHA and Special Status Wildlife Species Detail Map (City of San Diego [South])

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

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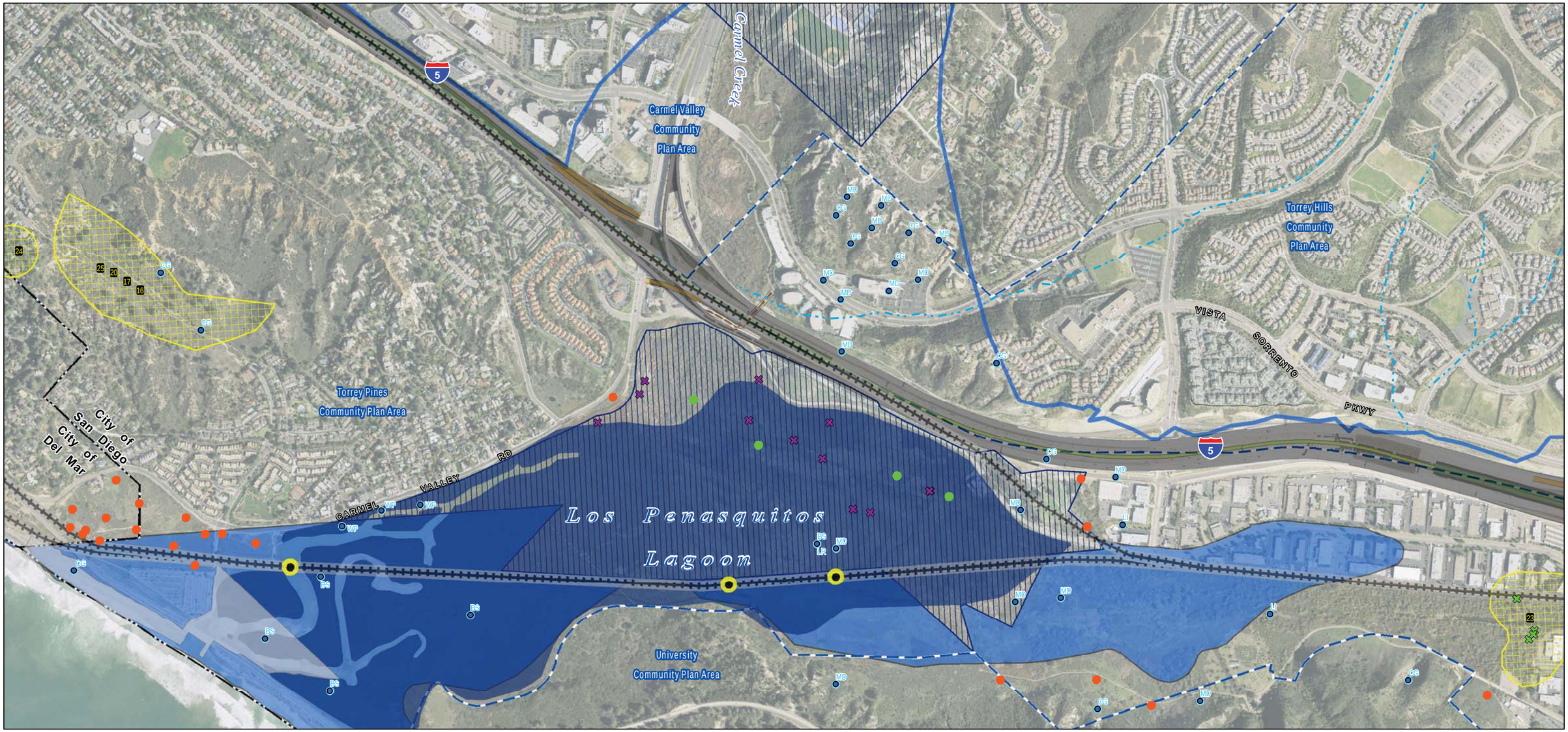

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

US Fish and Wildlife Service
- Western Snowy Plover Critical Habitat

Caltrans (I-5 Study Area)
Sensitive Species
- Belding's savannah sparrow
- California gnatcatcher
- California least tern
- Least Bell's vireo
- Light-footed clapper rail

Coastal Zone Boundary
Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species Codes

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

FIGURE 5.5-2B

Potential ESHA and Special Status Wildlife Species Detail Map (City of San Diego [Central])

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

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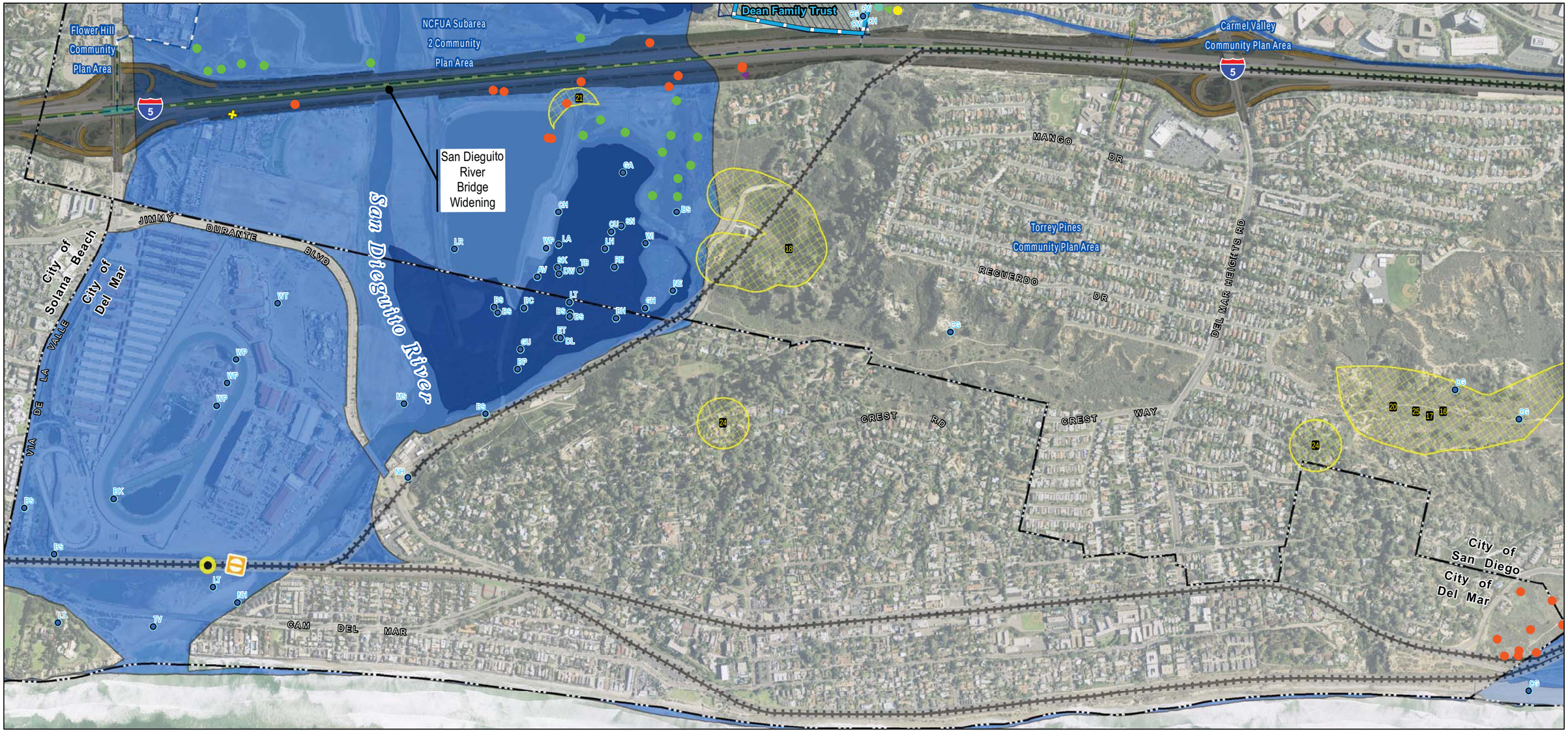

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform
- Mitigation Site - Secured

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

US Fish and Wildlife Service
- Western Snowy Plover Critical Habitat

Caltrans (I-5 Study Area)
Sensitive Species
- NW San Diego pocket mouse
- Rufous-crowned sparrow
- Belding's savannah sparrow
- California gnatcatcher
- San Diego desert woodrat
- San Diego horned lizard
- Least bittern

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species Codes

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

FIGURE 5.5-2C

Potential ESHA and Special Status Wildlife Species Detail Map (City of Del Mar / San Diego [North])

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

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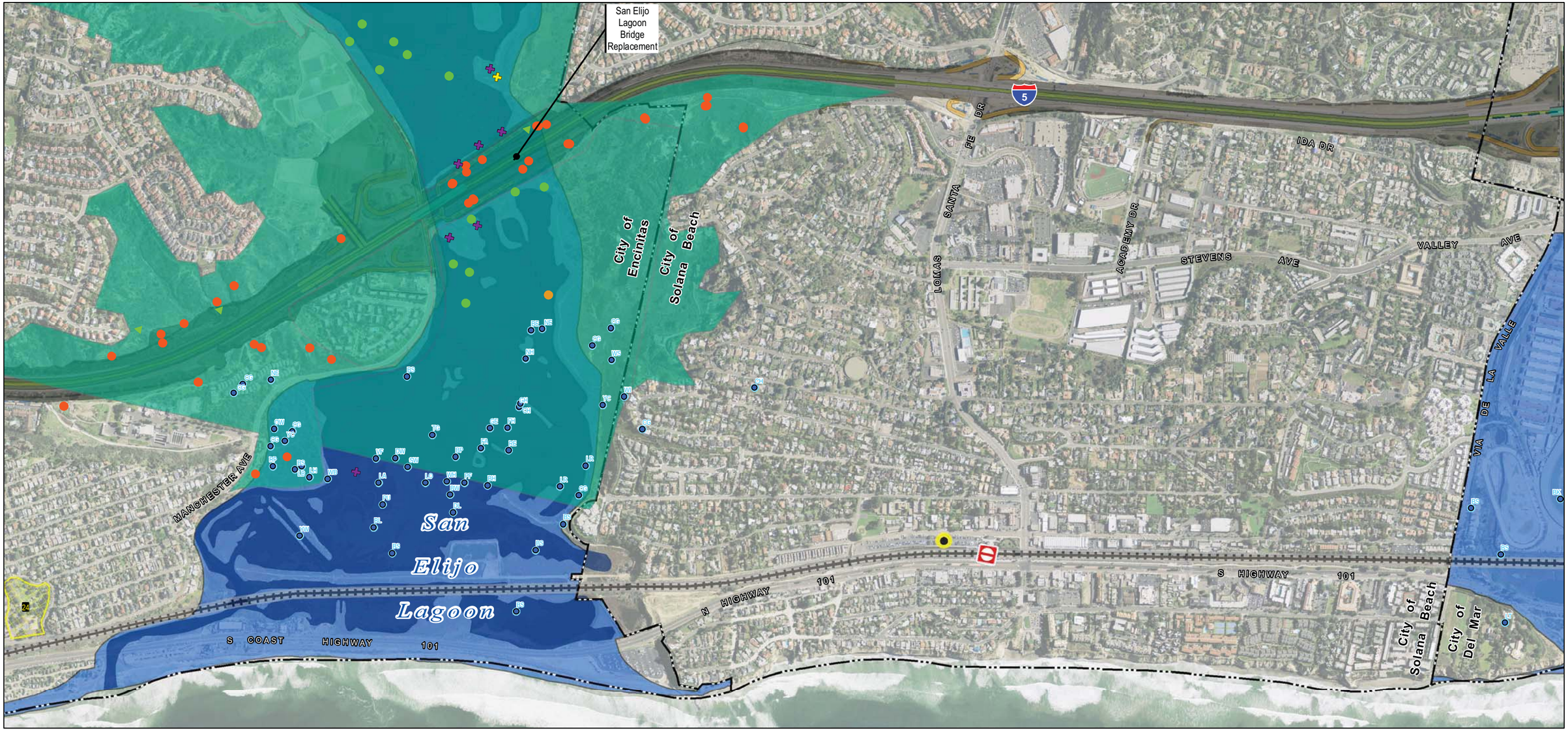

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

US Fish and Wildlife Service
- California Gnatcatcher Critical Habitat

Caltrans (I-5 Study Area)
Sensitive Species
- NW San Diego pocket mouse
- Belding's savannah sparrow
- California gnatcatcher
- California least tern
- Least bittern
- Light-footed clapper rail

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

***See Legend Page for Sensitive Species Codes**

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

FIGURE 5.5-2D

Potential ESHA and Special Status Wildlife Species Detail Map (City of Encinitas [South] / Solana Beach)

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

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NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

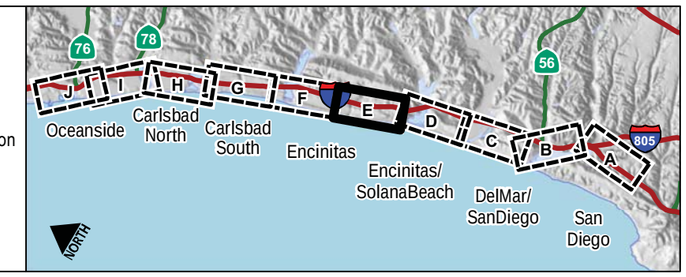
I-5 Project Area
LOSSAN Project Area
LOSSAN Overcrossing Improvements
LOSSAN Rail Station
LOSSAN Proposed Platform

SanGIS Special Species Sightings
Sensitive Sighting Location*
CA Department of Fish and Game
CNDDB Specific Resource*

Caltrans (I-5 Study Area)
Sensitive Species
California gnatcatcher
US Fish and Wildlife Service
California Gnatcatcher Critical Habitat

Coastal Zone Boundary
Coastal Zone Permit Areas
Coastal Commission Permit Jurisdiction
Local Coastal Program Deferred Certification
Local Coastal Program Element
Stream/River
Lagoon

*See Legend Page for Sensitive Species Codes



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

FIGURE 5.5-2E

Potential ESHA and Special Status Wildlife Species Detail Map (City of Encinitas [Central])

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

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Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform
- Mitigation Site - Secured

SanGIS Special Species Sightings
- Sensitive Sighting Location*

CA Department of Fish and Game
- CNDDB Specific Resource*

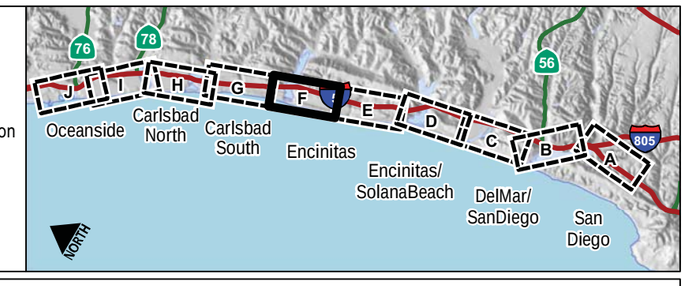
US Fish and Wildlife Service
- Western Snowy Plover Critical Habitat
- California Gnatcatcher Critical Habitat

***See Legend Page for Sensitive Species Codes**

Caltrans (I-5 Study Area)
Sensitive Species
- Orange-throated whiptail
- Belding's savannah sparrow
- California gnatcatcher
- California least tern
- Light-footed clapper rail

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon



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

FIGURE 5.5-2F

Potential ESHA and Special Status Species Detail Map (City of Encinitas [North] / City of Carlsbad [South])

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

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Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

I-5 Project Area
LOSSAN Project Area
LOSSAN Overcrossing Improvements
LOSSAN Rail Station
LOSSAN Proposed Platform

SanGIS Special Species Sightings
Sensitive Sighting Location*
CA Department of Fish and Game
CNDDB Specific Resource*

*See Legend Page for Sensitive Species Codes

Caltrans (I-5 Study Area)
Sensitive Species
Least Bell's vireo
San Diego fairy shrimp
US Fish and Wildlife Service
California Gnatcatcher Critical Habitat
Riverside Fairy Shrimp Critical Habitat
San Diego Fariy Shrimp Critical Habitat

Coastal Zone Boundary
Coastal Zone Permit Areas
Coastal Commission Permit Jurisdiction
Local Coastal Program Deferred Certification
Local Coastal Program Element
Stream/River
Lagoon

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

FIGURE 5.5-2G

Potential ESHA and Special Status Species Detail Map (City of Carlsbad [Central])

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

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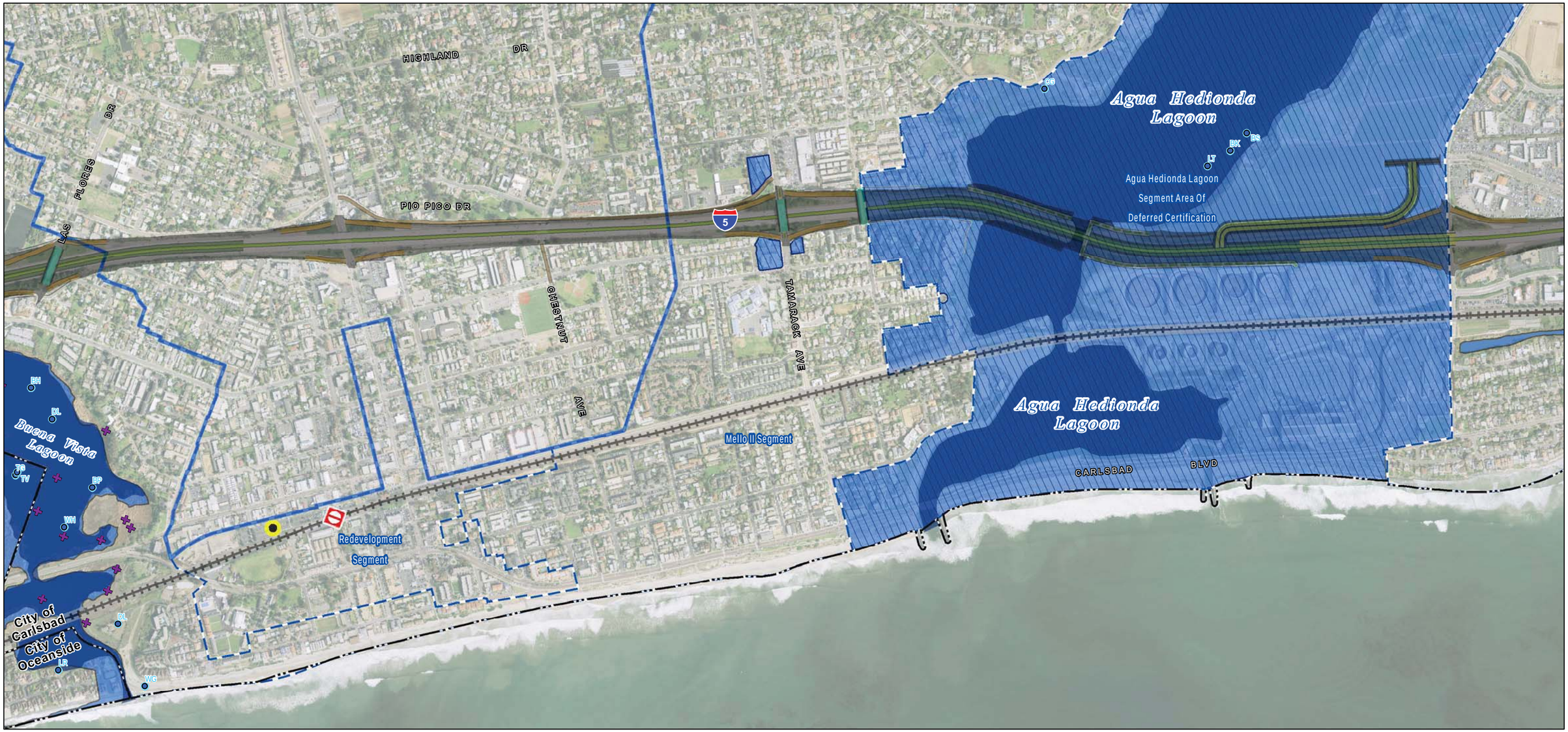

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

Caltrans (I-5 Study Area)
Sensitive Species
- Light-footed clapper rail

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

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

FIGURE 5.5-2H

Potential ESHA and Special Status Species Detail Map (City of Carlsbad [North])

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

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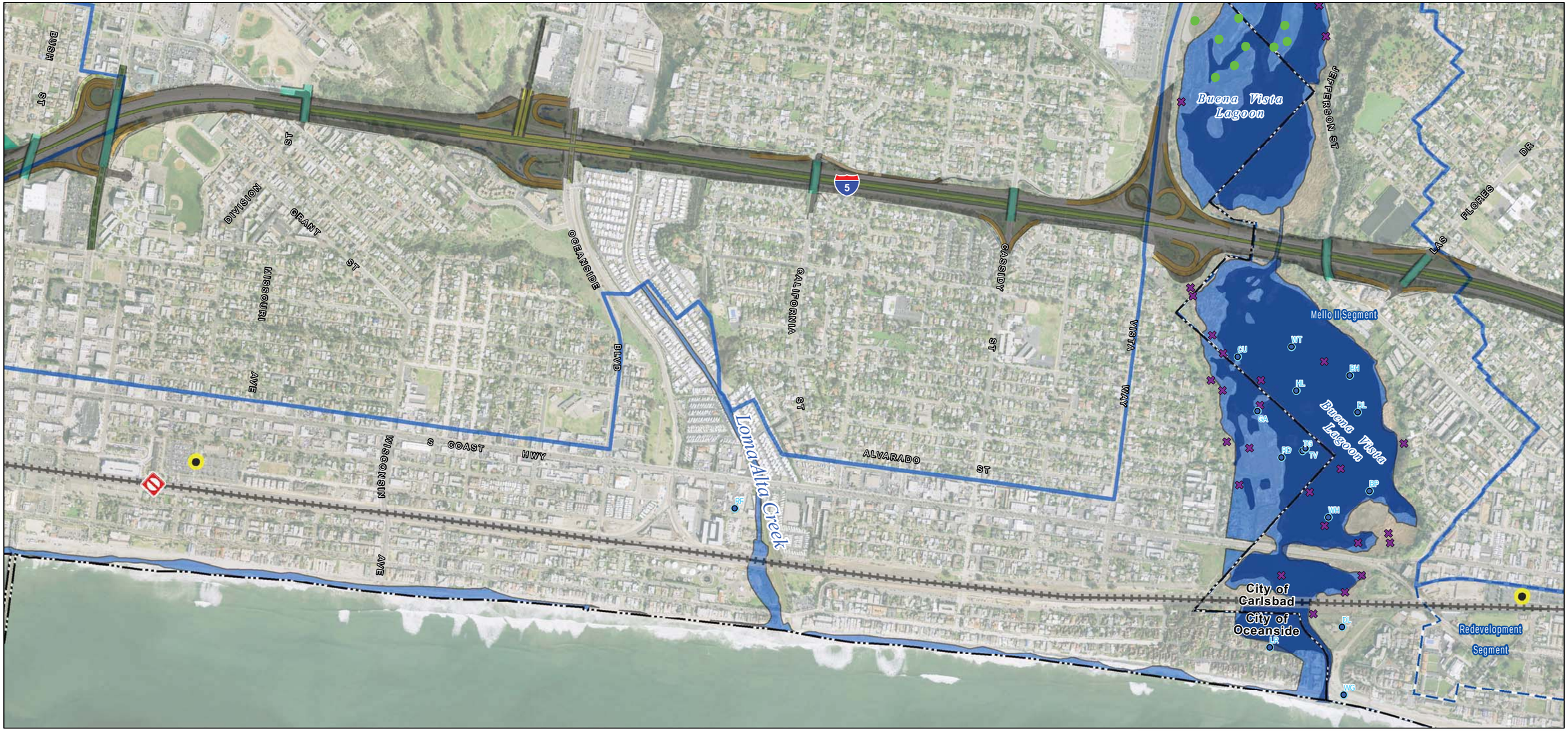

NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

Caltrans (I-5 Study Area)
Sensitive Species
- Belding's savannah sparrow
- Light-footed clapper rail

US Fish and Wildlife Service
- California Gnatcatcher Critical Habitat

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

*See Legend Page for Sensitive Species Codes

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

FIGURE 5.5-2I

Potential ESHA and Special Status Species Detail Map (City of Oceanside [South])

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

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NORTH

Note: TREP/PWP ESHA maps provide an overview of existing and potential ESHA resources in the corridor based on the corridor setting as documented and evaluated for purposes of preparing the Draft TREP/PWP. As locations and boundaries of ESHA resources are subject to change over time due to varying circumstances, these maps are not intended to portray fixed locations or boundaries for ESHA resources. Where TREP/PWP-authorized projects have the potential to impact ESHA resources, site-specific evaluations will be conducted for project-specific implementation pursuant to federal consistency review and NOID precedures, as applicable.

0 500 1,000 2,000 Feet

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- LOSSAN Proposed Platform

SanGIS Special Species Sightings
- Sensitive Sighting Location*

Caltrans (I-5 Study Area)
Sensitive Species
- California gnatcatcher
- Southwestern willow flycatcher
- Least Bell's vireo

US Fish and Wildlife Service
- California Gnatcatcher Critical Habitat
- Least Bell's Vireo Critical Habitat
- Southwestern Willow Flycatcher Critical Habitat

- Coastal Zone Boundary

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Element
- Stream/River
- Lagoon

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

FIGURE 5.5-2J

Potential ESHA and Special Status Species Detail Map (City of Oceanside [North])

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

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5.6 Archaeological and Paleontological Resources

5.6.1 Archaeological and Paleontological Resources in the Corridor

The NCC is located in a region of sensitivity for archaeological and paleontological resources. The corridor is located in an area of San Diego County with the potential to include archaeology sites associated with the San Dieguito Complex (dating as far back as 8000 to 10000 years before present [B.P.]), and with the La Jolla Complex (generally dating between 3000 and 8000 B.P.), but with some evidence of continued occupation occurring between 1300 and 3000 B.P. Archaeological resources most commonly observed within these sites in the region include lithic scatters, milling stations, shell middens, and quarries. Late Period sites, dating between 200 to 1300 B.P., are less common in the corridor and are characterized by resources associated with a more sedentary settlement system including habitation or village sites, and which have the potential to include midden, rock features and, in some cases, human burials. In addition, as is with much of California, the corridor area is subject to complex, active geologic processes that have resulted in surface exposure of many rock units with high paleontological sensitivity. As such, the corridor also contains a rich geologic record.

5.6.1.1 LOSSAN Rail Corridor Resources

Archaeological Resources

Information regarding the locations of archaeological sites within the Area of Potential Effect (APE) of the rail improvement area was obtained from the California Historical Resources Information System (CHRIS) information centers. The Native American Heritage Commission (NAHC) was also consulted for a search of their Sacred Lands file and lists of Native American contacts,[1] with cultural resource specialist knowledge and background of regional prehistory used to supplement the record's search results. The study area for cultural resources for the LOSSAN rail corridor improvements was defined in the *LOSSAN Final Program EIR/EIS* (September 2007) as a result of consultation with the State Historic Preservation Office (SHPO).[2] Traditional cultural properties were assessed on a presence/absence basis using record searches of CHRIS repositories for each alignment option.

The *LOSSAN Final Program EIR/EIS* indicates that six prehistoric archaeological sites[3] and possibly as many as 14 historic archaeological sites[4] (depending on the Del Mar tunnel option) are located within the APE for the rail improvements and, in some locations of the corridor, there is a high potential for unknown sites to occur, particularly where rail improvements would occur in proximity to the coast and coastal water bodies. No traditional cultural properties[5] were identified in the APE of any of the alignment options.

Paleontological Resources

Literature and institutional record's research and review of geologic maps and geographic data from the University of California Museum of Paleontology in Berkeley resulted in designating areas within

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1 Consultation with the Native American Heritage Commission was also undertaken in the context of the statewide high-speed rail program, and was used in development of the *LOSSAN Final Program EIR/EIS*.

2 The initiation of consultation with the SHPO was done in the context of the statewide high-speed rail program.

3 Prehistoric archaeological sites in California are places where Native Americans lived or carried out activities during the prehistoric period before 1769 AD. Prehistoric sites contain artifacts and subsistence remains, and they may contain human burials.

4 Historic archaeological sites in California are places where human activities were carried out during the historic period between 1769 AD and 50 years ago. Some of these sites may be the result of Native American activities during the historic period, but most are the result of Spanish, Mexican, or Anglo-American activities. Other sites may be the result of Asian and African American groups.

5 Traditional cultural properties are places associated with the cultural practices or beliefs of a living community that are rooted in that community's history and are important in maintaining the continuing cultural identity of the community.

the APE as having "high," "low," or "undetermined" paleontologic sensitivity. High sensitivity areas include sedimentary units with a high potential for containing significant nonrenewable paleontological resources, including units that contain a high density of recorded vertebrate fossil sites, have produced vertebrate fossil remains within the study area and/or vicinity, and are very likely to yield additional remains within the study area. Low sensitivity areas include rock units with no or a very low density of recorded resource localities, those that have produced little or no fossil remains within the study area and/or vicinity, and units not likely to yield any remains within the study area. Undetermined sensitivity areas include rock units with limited exposure(s) in the study area and that have been studied very little, and units in which there are no known recorded paleontological resource localities; however, in other areas, the same or a similar rock unit contains sufficient paleontological resource localities to suggest that exposures to disturbance of the unit within the rail right-of-way (ROW) have potential to yield fossil remains.

The study area for paleontological resources for the LOSSAN rail corridor improvements was defined in *LOSSAN Final Program EIR/EIS* as 100 feet on each side of the centerline of proposed alignment options (including station locations), in both non-urban and urban areas. The study area for paleontological resources is limited to the area that would potentially be disturbed by earthwork construction activities.

The *LOSSAN Final Program EIR/EIS* indicates the paleontological sensitivity rating is high throughout the NCC. Geologic formations within the rail corridor that have the potential to include paleontological resources include:

- The Ardath Shale and Scripps Formation along the rail segments from Highway 52 to San Diego, with shark, ray, bony fish, marine microorganism and macroinvertebrate, rhinoceros, artiodactyl, brontothere, uintathere, crocodile, turtle, as well as wood fossils.
- The Delmar Formation in Del Mar and between the I-5/805 Spilt and Highway 52, with estuarine vertebrate and invertebrate, aquatic reptile, and rhinoceros fossils.
- The Torrey Sandstone from Encinitas to Solana Beach and Del Mar, with plant and marine invertebrate fossils.
- The Capistrano Formation from Camp Pendleton, Oceanside, and Carlsbad, with whale, walrus, sea cow, fur seal, sea bird, shark, ray, bony fish, and kelp fossils.
- The San Diego Formation along Highway 52 to San Diego, with shark, ray, bony fish, marine invertebrate, sea bird, walrus, fur seal, cow, whale, dolphin, terrestrial mammal, wood, and leaf fossils.
- The Lindavista Formation along I-5/I-805, with marine invertebrate, shark, and whale fossils.
- The Bay Point Formation along Highway 52 to San Diego, with shark, ray, bony fish, and mollusk fossils.
- Unnamed marine terrace deposits from Camp Pendleton through Encinitas and Solana Beach to the Santa Fe Depot in San Diego, with marine invertebrate, shark, ray, bony fish, and terrestrial mammal fossils.

5.6.1.2 I-5 Highway Corridor Resources

Archaeological Resources

Numerous studies have been conducted and reviewed in preparing the *I-5 NCC Project Draft EIR/EIS* (June 2010) including archaeological and historic architecture field surveys to identify cultural resources; archaeological test excavations designed to determine the nature and significance of the

sites within the APE; a geomorphic study to determine the potential for buried soils and cultural deposits to occur within the APE; data recovery plans for two sites that would be adversely affected by the proposed improvements; and an Environmentally Sensitive Area (ESA) Action Plan designed to prevent direct or indirect impacts to cultural resources located adjacent to, but outside project construction activities. In addition, numerous archival sources were used to assist in identifying resources within the APE, including the CHRIS repository at San Diego State University, local historical societies, Native American tribes and individuals, historical maps and photographs, and discussions with long-time area residents. CHRIS is administered by the California Department of Parks and Recreation and includes all resources listed in the California Register of Historical Resources (CRHR); all resources in California listed or eligible for listing in the National Register of Historic Places (NRHP); and traditional cultural properties, including some Native American traditional cultural sites identified through consultation with the California Department of Parks and Recreation (Section 106 of National Historic Preservation Act), the SHPO or the NAHC.

The APE for cultural resources within the highway improvement area was developed in consultation with the project archaeologist, project manager, and project engineers, with continuous input from Design and other Environmental functional units. The APE was established as the limits of future ROW for the roadway work, and in considering other potential affected areas including proposed soundwall locations outside the ROW, biological mitigation sites, and construction and utility easements.

A total of 27 archaeological sites have been identified within or immediately adjacent to the APE for the highway improvement area. Of these, 11 archaeological sites are considered eligible for the NRHP/CRHR, 9 of which fall outside the project's Area of Direct Impacts (ADI) and therefore are not directly affected by the proposed highway improvements.

Two prehistoric archaeological sites, CA-SDI-12670 and CA-SDI-17928, would be directly affected by the undertaking:

- **CA-SDI-12670** was initially recorded in 1929. Excavations at various portions of the site occurred in 1960–1961, 1984–1985, 1996, and 2000. Testing within the APE and ROW was conducted in 2002, where a remnant portion of the once large, shell midden dating from the beginning of the middle Holocene period (circa 4500–6000 years B.P.) was identified. Large portions of the site have been severely affected by development to the west and highway construction to the east; however, the site area within the ROW appears to retain integrity and appears to be eligible for the NRHP/CRHR for its research potential to contribute important information concerning chronology, the organization of human coastal exploitation during the middle Holocene period, and to the patterns of paleoenvironmental, climate and vegetation, and change associated with Batiquitos Lagoon.
- **CA-SDI-17928** was initially recorded in 2006 as a deposit of marine shell, which was reported to also contain flaked lithics and ground stone. Testing in 2006 identified a substantial cultural deposit. The site appears to be eligible for the NRHP/CRHR for its research potential. Radiocarbon dates suggest that further investigations may shed light on the chronology of changing subsistence strategies during the early and middle Holocene period (circa 8000–4500 years B.P.)

Remaining sites inside the APE for the highway improvements were deemed not eligible for the NRHP/CRHR for various reasons, including lack of cultural remains, no further research potential, no identified Native American concerns, and/or highly disturbed or displaced deposits. These conclusions are based on the results of archaeological investigations and Native American consultations.

Paleontological Resources

A paleontology study (*Paleontological Resource Assessment, I-5 NCC Project, Caltrans District 11, San Diego County, California*) was conducted for the highway improvements and identified the presence of geologic formations within the I-5 highway corridor that have the potential to contain important fossil remains within the project footprint. Geologic formations within the I-5 highway corridor that have the potential to include paleontological resources include:

- The Delmar Formation from Sorrento Valley in the south to at least Batiquitos Lagoon in the north, and from the coast inland to La Costa and Rancho Santa Fe with well-preserved to poorly preserved remains of estuarine invertebrates (e.g., clams, oysters, and snails) and estuarine vertebrates (e.g., sharks, rays, and fishes). An extremely important locality at Swami's Point in Encinitas has yielded well-preserved skull remains of aquatic reptiles (e.g., crocodile) and terrestrial mammals (e.g., tillodont and early rhinoceros).
- Torrey Sandstone Formation from Sorrento Valley in the south to Batiquitos Lagoon in the north, and from the coast inland to La Jolla Valley and Olivenhain with potentially important remains of fossil plants and marine invertebrates (e.g., clams, oysters, snails, and barnacles) and vertebrate fossil remains including teeth of crocodiles, sharks, and rays.
- Ardath Shale Formation La Jolla, Pacific Beach, and Clairemont in the south to Carmel Valley in the north with marine microfossils, macroinvertebrates, and vertebrates (e.g., sharks, rays, and bony fish).
- Scripps Formation from Presidio Park in the south, north to Del Mar, and from Clairemont east to La Jolla Valley, with remains of marine organisms including clams, snails, crabs, sharks, rays, and bony fishes, and remains of fossil reptiles (e.g., crocodile and turtle) and land mammals (e.g., uintathere, brontothere, rhinoceros, and artiodactyl).
- The Santiago Formation, containing three recognized members referred to as "A," "B," and "C" occurs in the general area of Olivenhain and Cardiff-by-the-Sea, and collectively includes remains of turtles, snakes, lizards, crocodiles, birds, and mammals (e.g., opossums, insectivores, primates, rodents, brontotheres, tapirs, protoreodonts, rhinoceros, and uintathere) and various types of marine and estuarine mollusks.
- An unmapped formation of Oligocene age occurs in the exposed sedimentary rocks of the Santiago Formation and includes terrestrial mammal fossils.
- The San Onofre Breccia is an alluvial fan and nearshore marine rock unit from Oceanside, north through the coastal portion of the Camp Pendleton Marine Corps Base, with remains of nearshore marine foraminifers and bivalve mollusks and mammals.
- The San Mateo Formation from the San Luis Rey River Valley in Oceanside north through Camp Pendleton Marine Corps Base to San Mateo Point near San Clemente with fossils of marine vertebrates including rays, sharks, bony fishes, sea birds, dolphins, sperm whale, baleen whales, sea cow, fur seals, walrus, and sea otter, marine invertebrates (e.g., clams, scallops, snails, and sea urchins), and terrestrial mammal remains (e.g., horse, camel, llama, and peccary) have been recovered from these deposits.
- The Lindavista Formation occurs over a large area from the International Border north to San Clemente with remains of nearshore marine invertebrates including clams, scallops, snails, barnacles, and sand dollars, as well as sparse remains of sharks and baleen whales.
- The Bay Point Formation occurs along the coast from the International Border to San Clemente with remains of marine invertebrate fossils such as mollusks, crustaceans, and echinoderms, as well as sparse remains of marine vertebrates such as sharks, rays, and bony fish and, in the non-

alluvial deposits, includes concentrated fossil remains of terrestrial mammals such as ground sloth, dire wolf, tapir, horse, deer, camel, mastodon, and mammoth.

5.6.2 TREP/PWP Concerns

Environmental documentation and analysis prepared for the TREP/PWP highway and rail corridor improvements indicate that there are known archaeological resources within the project improvement areas that could be affected by proposed grading and construction activities. As many archaeological resources have been disturbed by past development projects, the remaining sites within the corridor have become increasingly valuable resources. Further loss and degradation could occur if corridor projects located in areas of sensitivity are not properly designed, monitored, and managed during earth-moving activities and construction to avoid or mitigate potential impacts to the resource.

In California, fossils are considered a limited, nonrenewable, and highly sensitive scientific resource. Direct impacts to paleontological resources could occur when earthwork activities, such as mass grading operations, cut into geological deposits containing fossils, thereby directly damaging the resource, or exposing paleontological resources to potential indirect impacts (surficial erosion, uncontrolled specimen collection, etc.).

5.6.2.1 LOSSAN Rail Corridor Impact Assessment

Archaeological Resources

Approximately 6 prehistoric sites and possibly as many as 14 archaeological sites (depending on the Del Mar tunnel option) are located within the APE for the rail improvements and, in some locations of the corridor, there is a high potential for unknown sites to occur particularly where rail improvements would occur in proximity to the coast and coastal water bodies.

Generally, rail alignment options that involve tunneling would avoid most impacts to cultural resources due to the depth of the tunneling; however, at-grade improvements, including constructing new tracks and extended paved surfaces, and constructing transit stations and parking structures or lots, would disturb the ground surface, potentially resulting in impacts to resources. In addition, trenching for rail improvements would involve subsurface disturbance and therefore could increase the potential to encounter unknown archaeological sites. As such, the trench options for rail improvements would have a somewhat higher potential for impacts to archaeological resources than at-grade options.

Paleontological Resources

Potential impacts to paleontological resources from proposed rail improvements could occur during earthwork activities involving sensitive geologic formations that could damage paleontological resources directly, or expose fossils to long-term surface erosion and/or uncontrolled specimen collection.

5.6.2.2 I-5 Highway Corridor Impact Assessment

Archaeological Resources

Eleven archaeological sites have been identified in the highway corridor and are considered eligible for the NRHP/CRHR. Nine of these sites fall outside the project's ADI and therefore would not be directly affected by the proposed highway improvements; however, they may still have direct or indirect project-related impacts. Mitigation measures that establish an ESA Action Plan would ensure that archaeological sites located outside the project's ADI would be protected from substantial resource impacts.

Archaeological sites CA-SDI-12670 and CA-SDI-17928, determined to be eligible at the local level of significance for the NRHP/CRHR because of their potential to provide information important in prehistory, are located within the highway corridor and would be adversely affected by the corridor improvements due to soundwall construction. Proposed soundwall locations would affect a very small portion of each site, and would be limited to the site peripheries where previous disturbances at both locations have occurred and which have somewhat compromised the integrity of the resources.

Paleontological Resources

Impacts to paleontological resources could occur during earthwork activities involving sensitive geologic formations that could damage paleontological resources directly, or expose fossils to long-term surface erosion and/or uncontrolled specimen collection.

5.6.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

While the proposed highway and rail improvements have the potential to affect sensitive archaeological and paleontological resources in the corridor, the majority of program improvements would occur within previously disturbed and developed areas of existing highway and rail ROWs and adjacent land uses. In this regard, the TREP/PWP program improvements have been designed to avoid and minimize, to a large extent, the potential for adverse affects to cultural resources.

5.6.3.1 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements shall protect and minimize impacts to archaeological and paleontological resources. Where new development may potentially adversely impact archaeological or paleontological resources, appropriate mitigation measures shall be required and implemented. Project-level analysis for proposed rail improvements shall not occur, however, until after project alternatives are chosen; preliminary design, engineering, and resource impact analyses are developed; and mitigation measures and monitoring plans are prepared; therefore, analysis of the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary resource impact assessment, and design and development strategies to address potential resource impacts. The following design and development strategies provide guidance in addressing potential resource impacts for specific rail development projects. As proposed rail improvement plans are further developed, additional design and development strategies to address potential impacts to archaeological and paleontological resources would be evaluated by the lead agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable:

1. A qualified Native American monitor and archaeologist, or paleontologist, as applicable, should be present at all times during ground-disturbing activities occurring in areas of known or suspected archaeological and/or paleontological significance. Should previously unknown archaeological and/or paleontological resources be encountered during construction activities, all activity that could damage or destroy these resources should be temporarily suspended until qualified archaeologist/paleontologists and Native American representatives, as applicable, have examined the site and mitigation measures have been developed that address impacts of the project on archaeological and/or paleontological resources. Development should incorporate measures to address issues and impacts identified through any archaeologist/paleontologist and/or Native American consultation.
2. The following should be considered as mitigation measures for potential impacts to eligible or listed archaeological sites as identified by the SHPO within the rail improvement corridor:

- Develop procedures for fieldwork, identifying, evaluating, and determining potential effects to cultural resources in consultation with the SHPO and Native American tribes. On-site monitoring should be incorporated in the fieldwork when sites are known or suspected of containing Native American human remains. All procedures should comply with federal and state statutes concerning burials.
- Avoid impacts wherever feasible, and if not feasible, minimize scale of impact to the extent practical.
- Cap or cover sensitive site before construction.
- Provide data recovery where impacts would destroy or affect data of a potentially significant site.

3. Project-level analysis for potential archaeological resource impacts of rail improvements should be conducted pursuant to future environmental and phased federal consistency review, when applicable, and should include a field survey of the APE, review of geomorphological maps and relevant studies, and consultation with the SHPO and appropriate Native American tribes and individuals knowledgeable about the nature and locations of traditional cultural properties to assess the potential for corridor segments to contain significant archaeology sites within the APE.
4. The APE for rail improvements should be defined as all areas that could include direct and indirect impacts from construction, including locations of any construction easements and construction-related facilities (such as equipment staging areas, borrow and disposal areas, and access roads).
5. All identified archaeological resources should be evaluated using NRHP and CRHR eligibility criteria. Where applicable, evaluating archaeological sites should include preparing test plans for archaeological resources that contain regionally relevant research questions. Lead agencies should consult with the SHPO on test plans and determinations of eligibility for evaluated resources, and any required mitigation measures and reporting requirements.
6. A paleontological resource assessment program should be completed for project-level environmental and phased federal consistency review, when applicable. The assessment program should include field reconnaissance to identify exposed paleontological resources and more precisely determine potential paleontological sensitivity for the project. In addition, a Paleontological Resources Treatment Plan should be prepared by a qualified paleontologist, which should address the treatment of paleontological resources discovered prior to and constructing rail improvements. Mitigation measures for paleontological resources should be developed and implemented at the project-level for rail improvements, and may include the following measures, where appropriate:
   - Workers' education on resources protection measures
   - Recovery of fossils identified during the field reconnaissance
   - Construction monitoring
   - Development of protocols for handling fossils discovered during construction, likely including temporary diversion of construction equipment so that the fossils could be recovered; identified; and prepared for dating, interpreting, and preserving at an established, permanent, accredited research facility.

5.6.3.2 I-5 Highway Corridor Opportunities

Interpretive Element at Vista Point Overlook. The TREP/PWP includes a number of community enhancement elements that would provide the opportunity to install interpretative displays that could be used to raise awareness of residents and visitors of the occurrence, sensitivity, and value of

archaeological and paleontological resources in the corridor. One such opportunity would be at Vista Point Overlook at San Elijo Lagoon (along southbound I-5, just north of Manchester Avenue), which would include an interpretative display with information regarding the Native American regional culture and how potential impacts to cultural resources are considered as part of the planning and environmental process.

5.6.3.3 I-5 Highway Corridor Policies and Implementation Measures

In addition to the opportunity to educate residents and visitors of the occurrence, sensitivity, and value of archaeological and paleontological resources in the corridor presented by the proposed highway and community enhancement projects discussed above, siting and design parameters for proposed highway and community enhancement projects would be implemented by Caltrans pursuant to the following policy and implementation measures to ensure that improvements are designed, implemented, and maintained to provide for maximum protection of archaeological and paleontological resources. Notice of Impending Development (NOID) submittals for highway and community enhancement project implementation should demonstrate compliance with the following policy and implementation measures. Where additional or revised implementation measures may be identified pursuant to further consultation with an archaeologist/paleontologist and/or Native American representatives, such measures should be detailed in all project NOID submittals to ensure maximum protection of archaeological and paleontological resources.

Policy 5.6.1: New highway development and associated community enhancement improvements should strive to protect and minimize impacts to archaeological and paleontological resources. Where new development may potentially adversely impact archaeological or paleontological resources, appropriate mitigation measures, including the measures identified below, should be required and implemented.

Implementation Measure 5.6.1: A qualified Native American monitor and Caltrans archaeologist, or paleontologist, as applicable, should be present during ground-disturbing activities occurring in areas of known or suspected archaeological and/or paleontological significance as identified in the *I-5 NCC Project Draft EIR/EIS*. If previously unknown archaeological and/or paleontological resources are encountered during construction, activities that can damage or destroy these resources should be temporarily diverted to another location until a qualified archaeologist or paleontologist, as applicable, has examined the finds and determined the appropriate measures necessary to mitigate any potential adverse impacts. Development should incorporate measures to address issues and impacts identified through any archaeologist/paleontologist and/or Native American consultation, which should be detailed in all project NOID submittals, where applicable.

Implementation Measure 5.6.2: An archaeological resources treatment plan should be developed and implemented by Caltrans to address potential impacts of highway improvements to archaeological sites CA-SDI-12670 and CA-SDI-17928. Native American monitors should be present during all excavations within the site boundaries and Caltrans should undertake data recovery excavations to salvage data from those portions of CA-SDI-12670 and CA-SDI-17928 to be affected.

Implementation Measure 5.6.3: An ESA Action Plan should be developed and implemented by Caltrans for highway and community enhancement construction activities located in the vicinity of eligible archaeological sites identified in the *I-5 NCC Project Draft EIR/EIS* to prevent direct or indirect impacts to cultural resources located adjacent to project construction activities. The ESA Action Plan should identify the individuals involved, and their roles and responsibilities for implementing the plan. Consistent with Implementation Measure 5.6.1, the construction contract should also contain language related to unanticipated discoveries should they be made during construction, including diverting

activities away from such finds until an archaeologist can assess their nature and significance. If unanticipated discoveries should occur, the SHPO should be contacted and the Section 103 consultation process should be reopened until a plan is developed to address either the preservation of the remains in place, or their proper removal and treatment. Appropriate Native American representatives should be contacted to participate in this process.

Implementation Measure 5.6.4: As part of the archaeological resources treatment plan to mitigate for potential impacts to cultural resources, Caltrans should provide or fund a public interpretive display for the Vista Point Overlook at San Elijo Lagoon, which should include information gained from the data recovery of those portions of CA-SDI-12670 and CA-SDI-17928 potentially affected by the project, and other resources recovered in the corridor, as appropriate, and should include information regarding the Native American regional culture and how potential impacts to cultural resources are considered and treated as part of the transportation development process.

Implementation Measure 5.6.5: Should unanticipated human remains be discovered during highway construction or associated community enhancement activities, Caltrans should implement all measures in compliance with State Health and Safety Code Section 7050.5 Public Resources Code Section 5097.98. All disturbances and activities should cease in any area or nearby area suspected to overlie remains, and the County Coroner, NAHC, and Caltrans District 11 Chief of the Environmental Resources Branch would be contacted, as applicable, who should coordinate with the Native American most likely descendants (MLD) on the respectful treatment and disposition of the remains.

Implementation Measure 5.6.6: A paleontological mitigation program should be developed and implemented by Caltrans during highway and community enhancement construction activities in areas of paleontological sensitivity as identified in the *I-5 NCC Project Draft EIR/EIS* and should include the following measures:

- **Monitoring:** A qualified principal paleontologist (M.S. or Ph.D. in paleontology or geology familiar with paleontological procedures and techniques) should be present at pre-grading meetings to consult with grading and excavation contractors. A paleontological monitor, under the direction of the qualified principal paleontologist, should be on site to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
- **Macrofossil/Microfossil Analysis:** When fossils are discovered, the paleontologist (or paleontological monitor) should recover the fossil remains. Construction work in these areas should be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the monitoring and salvage portion of the mitigation program should be cleaned, repaired, sorted, and cataloged.
- **Report Preparation:** Prepared fossils, along with copies of all pertinent field notes, photos, and maps, should be deposited in a scientific institution with paleontological collections. A Paleontological Resource Assessment Report should be prepared by the San Diego Natural History Museum, which should outline the results of the mitigation program.

5.6.4 Coastal Act Consistency

Coastal Act Section 30244 provides for protecting archaeological resources of the coastal zone:

> Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The Coastal Act requires that archaeological and paleontological resources in the coastal zone be protected from adverse impacts by applying reasonable mitigation measures. Section 30116 of the Coastal Act defines archaeological sites that are referenced in the California Coastline and Recreation Plan or as designated by the SHPO as sensitive coastal resources.

5.6.4.1 LOSSAN Rail Corridor Consistency Analysis

The majority of rail program improvements would be located in previously developed and disturbed areas within the existing ROW. As such, potential impacts to archaeological and paleontological resources would be at least partially mitigated by design in an otherwise highly sensitive region for cultural resources.

Approximately 6 prehistoric archaeological sites and possibly as many as 14 historic archaeological sites (depending on the Del Mar tunnel option) are located within the APE for the rail improvements and, in some locations of the corridor, there is a high potential for unknown sites to occur particularly where rail improvements would occur in proximity to the coast and coastal water bodies.

Rail alignment options that involve tunneling would generally avoid most impacts to cultural resources due to the depth of the tunneling; however, at-grade improvements would disturb the ground surface, potentially resulting in impacts to resources. In addition, trenching for rail improvements would involve subsurface disturbance and therefore could increase the potential to encounter unknown archaeological sites.

The at-grade and the trench options for rail improvements from Oceanside to Solana Beach would remain within the existing LOSSAN rail corridor alignment, thereby minimizing potential impacts to previously undisturbed resources; however, the *LOSSAN Final Program EIR/EIS* identifies a high-build alternative within these areas that includes approximately 2.5 miles of trenching through downtown Carlsbad and downtown Encinitas, which could affect archaeological resources given the subsurface disturbance associated with these improvements.

Within the area of Del Mar, two archaeological sites are recorded within the APE for the tunnel option under Camino Del Mar, and given the proximity of the segment to the coast and San Dieguito River and Lagoon and to known sites in the area, there is an unknown but possibly high potential for prehistoric archaeological sites to occur in the improvement area. The I-5 highway corridor tunnel option within Del Mar would leave the LOSSAN rail corridor near the Del Mar Racetrack and turn inland, passing along the southern shore of San Dieguito Lagoon, and then proceed in a tunnel under I-5. Eight archaeological sites are recorded within the APE for this option. In addition, numerous prehistoric sites are known to exist along the shores and bluffs of San Dieguito Lagoon. Due to the proximity of this option to the lagoon and coast, there is an unknown, but possibly high potential for prehistoric archaeological sites to occur in the improvement area.

Both options in the Del Mar area would involve deep tunnels, which would avoid most impacts to cultural resources; however, the I-5 highway corridor tunnel option would require new at-grade and aerial rail infrastructure at the south end of San Dieguito Lagoon. As such, the I-5 highway corridor tunnel option would have a higher potential for impacts to unknown archaeological sites than the Camino del Mar tunnel option.

Additional design and development strategies to address potential impacts to archaeological resources would be evaluated for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable. These strategies could include, among other measures, developing procedures for fieldwork; identifying, evaluating and determining potential effects

to cultural resources in consultation with the SHPO and Native American tribes; and on-site monitoring of fieldwork when sites are known or suspected of containing resources. Where archaeological sites are identified, impacts would be avoided, wherever feasible, and would be evaluated using NRHP and CRHR eligibility criteria. Where applicable, evaluating archaeological sites would include preparing test plans for archaeological resources that contain regionally relevant research questions. The SHPO would be consulted on test plans and determinations of eligibility for evaluated resources and any required mitigation measures and reporting requirements.

Design and development strategies to address potential impacts to paleontological resources could include preparing a paleontological resource assessment program for project-level environmental analyses, where applicable. The assessment program would include field reconnaissance to identify exposed paleontological resources and more precisely determine potential paleontological sensitivity for the project. In addition, a Paleontological Resources Treatment Plan would be prepared by a qualified paleontologist to address the treatment of paleontological resources discovered prior to and during construction of rail improvements. Mitigation measures for paleontological resources could include, as applicable, workers' education on resources protection measures, recovery of fossils identified during the field reconnaissance, construction monitoring, and development of protocols for handling fossils discovered during construction.

5.6.4.2 I-5 Highway Corridor Consistency Analysis

In the case of the proposed highway improvements, the location of archaeological resources was determined early in the planning stages for the improvements, which allowed for project redesign to avoid the majority of known resources in the corridor. Many archaeological sites that initially were within the project's APE fell out as the project was redesigned to avoid them. ESAs for adjacent sites would be marked on construction contract plans, and would be called out in the contract specifications. A letter would be sent to the resident engineer's file, along with a copy of the ESA Action Plan, which would identify the individuals involved, and their roles and responsibilities for implementing the plan. The construction contract would also contain provisions related to unanticipated discoveries, including diverting activities away from resources until an archaeologist could assess their nature and significance. If unanticipated discoveries occurred, Section 106 consultation with the SHPO would be reopened.

Caltrans would undertake data recovery excavations to salvage data from those portions of CA-SDI-12670 and CA-SDI-17928 to be affected. TREP/PWP implementation measures require that Native American monitors would be present during excavations and the collections would be handled in accordance with professional archaeological standards. The archaeological materials would be analyzed and then reported in final data recovery reports. The artifacts would then be curated in perpetuity at the San Diego Archaeological Center and the recovery reports would be properly disseminated to local, regional, and state repositories.

If unanticipated human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner would be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC), who would then notify the Native American MLD. At the same time, the person who discovered the remains would contact the District 11 Chief of the Environmental Resources Branch so that they could work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 would be followed, as applicable.

TREP/PWP implementation measures further require that, as part of the archaeological treatment plan to mitigate potential impacts to prehistoric cultural resources, an interpretive element would be included at the Vista Point Overlook at San Elijo Lagoon, along southbound I-5, just north of Manchester Avenue. Specific design and content of these elements have not been decided; however, information gained from the data recovery of those portions of CA-SDI-12670 and CA-SDI-17928 potentially affected by the project, and other resources recovered in the corridor, would be incorporated in a public interpretive display at the overlook.

Finally, TREP/PWP implementation measures require that paleontological mitigation for highway improvements would be carried out during the project's construction phase and would consist of monitoring, macrofossil and microfossil analysis, and report preparation.

5.6.4.3 Coastal Act Consistency Analysis Summary

Based on available project and environmental data and the policies and implementation measures included herein, the proposed TREP/PWP improvements would protect archaeological and paleontological resources from substantial adverse impacts through sensitive site design and by applying reasonable mitigation measures, and therefore the TREP/PWP is consistent with Section 30244 of the Coastal Act.

5.6.5 Local Coastal Program Consistency

Appendix A includes Local Coastal Program (LCP) Policy Consistency Analysis matrices that evaluate TREP/PWP consistency with the archaeological/paleontological policies of each LCP area that would be affected by the proposed highway corridor improvements, and by those rail corridor improvements that would be subject to coastal development permit or PWP requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and thus fall under the exclusive jurisdiction of Surface Transportation Board (STB), the LCP policy consistency analysis could provide guidance or background information for analyzing rail project consistency with Section 30244 of the Coastal Act, as appropriate and applicable (see Section 1.1.3 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). The corridor's LCP archaeological and paleontological resource policies are summarized with brief city-specific consistency analyses below, which also integrate and supplement the above consistency analysis for Sections 30244 of the Coastal Act. A complete list of LCP policies and corresponding consistency analysis is included in the LCP Policy Consistency Analysis matrix for each city (Appendix A).

5.6.5.1 Local Coastal Program Consistency Analysis Summary

The corridor LCPs include policies that mirror, in part, the requirements of Section 30244 of the Coastal Act, which requires that reasonable mitigation measures be required where new development would adversely affect archaeological or paleontological resources as identified by the SHPO. LCPs for San Diego, Encinitas, and Carlsbad include additional and specific policies and development standards that address potential impacts to cultural resources including, among others, requirements for site-specific surveys to determine resource occurrence, significance and eligibility, and implementation of preservation and/or impact mitigation programs to avoid or minimize impacts.

<u>City of San Diego</u>

The City of San Diego LCP contains resource protection policies that address archaeological and/or paleontological resources in the North City Land Use Plan and the Community Plans for Torrey Pines, University, and the North City Future Urbanizing Framework Plan. The LCP and these noted plan components include policies that are unique to this portion of the corridor:

- **North City Land Use Plan**
  - Sites considered by a project archaeologist to be of sufficient significance will be submitted to The City of San Diego for possible designation as City Historical Landmarks. Sites which are, in the opinion of the project archaeologist, eligible for nomination to the National Register of Historic Places, should be so nominated. These actions will become part of the conditions of project approval.
  - Significant archaeological resources located on site should be preserved either intact underground by incorporating them into local dedicated open space areas or by providing for professional salvage operations. Preservation is usually preferable to salvage to the mitigation of impacts to archaeological resources by a project. Preservation permits future study of the resources with methods and techniques not yet developed, and may provide answers to questions which are yet to be raised. Salvage operations should include coordination between professional archaeologists, college or university classes, archaeological and historical societies, museums, and interested laymen capable of assisting in salvage work under the supervision of qualified professionals.
- **Torrey Pines Community Plan**
  - New development, both public and private, should incorporate site planning and design features that avoid or mitigate impacts to cultural resources. When sufficient plan flexibility does not permit avoiding construction on cultural resource sites, mitigation shall be designed in accordance with guidelines of the SHPO and the State of California Native American Heritage Commission.
- **University Community Plan**
  - Provide for the identification and recovery of significant paleontological resources.
  - Ensure the effective preservation and management of significant archaeological and historic resources.
  - Avoid destruction of native vegetation, wildlife habitats, geologic landmarks, or known archaeological resources.
- **North City Future Urbanizing Framework Plan (NCFUA)**
  - Create the environmental tier, an interconnected, viable system of natural open space that serves to protect and conserve cultural resources, flora, and fauna that occur in the NCFUA.

City of Encinitas

The City of Encinitas LCP designates a Special Study Overlay for Cultural/Historic Resources and includes the following policies to ensure protecting significant paleontological, historical, and archaeological resources:

- Make every effort to ensure significant scientific and cultural resources in the planning area are preserved for future generations.
- Require that paleontological, historical, and archaeological resources in the planning area are documented, preserved, or salvaged if threatened by new development.
- Survey to identify historic structures and archaeological/cultural sites…ensure action to ensure preservation.
- The presence, significance and protection of cultural/historic resources should be addressed through the City's environmental review processes and zoning regulations…a system of screening

development applications and building/demolition permits shall be implemented to avoid unintended loss of resources.

City of Carlsbad

The City of Carlsbad LCP incorporates Section 30244 of the Coastal Act and includes other policies that speak to preservation and mitigation for archaeological resources. The LCP relies on the environmental impact review process to determine where development will adversely affect archaeological and paleontological resource and notes that site-specific review should also determine the most appropriate methods for mitigating impacts. In addition, for the West Batiquitos Lagoon/Sammis Properties Land Use Segment, the LCP provides that a program of preservation and/or impact mitigation regarding archaeological sites located on the affected area shall be completed prior to any development.

As discussed in detail in the Coastal Act policy consistency analysis above, TREP/PWP improvements would protect archaeological and paleontological resources from substantial adverse impacts through sensitive site design and by applying reasonable mitigation measures. As such, the archaeological and paleontological resource protection policies of the City LCPs noted above do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore these policies would not need to be amended to implement the proposed transportation facility improvements.

5.7 COASTAL VISUAL RESOURCES

5.7.1 Visual Resources in the Corridor

The NCC is the primary transportation link between two of the major metropolitan regions in California (Los Angeles and San Diego) and although the corridor has experienced a significant amount of urban growth, its scenic character has managed to persist as a unique coastal resource. Development densities within the NCC have remained low, for the most part, and large groupings of mature trees, large open space areas with significant natural resources, and the coastline are the primary coastal visual resources interspersed in the developed landscape. Much of the NCC's existing rail and highway system parallels the Pacific Ocean's coastline and, in many locations, the transportation facilities offer expansive views of the coastline, river valleys, coastal lagoons, beaches, and other upland scenic resources.

5.7.1.1 LOSSAN Rail Corridor Resources

The LOSSAN rail corridor provides travelers with a variety of significant coastal views and distinct visual experiences, generally characterized as urban mixed use, suburban and coastal communities, natural open space areas, and expansive ocean and coastline environments.

Traveler Views

Given the proximity of the rail alignment to the shoreline, expansive views of the ocean and coastline are available along many portions of the NCC. This is particularly true in Del Mar where the rail corridor lies adjacent to the shoreline (Figure 5.7-1B).

The rail corridor crosses five coastal lagoons and two river valleys, which represent some of the last wetlands of their kind in southern California. These coastal waterbodies are coupled with expansive open space areas that offer visual relief from views of surrounding urban development and also serve as viewsheds, providing visual access to the ocean and inland foothills. These scenic coastal resources exist at the following locations (from south to north):

- Las Peñasquitos Lagoon in San Diego
- San Dieguito River in Del Mar
- San Elijo Lagoon in Solana Beach and Encinitas
- Batiquitos Lagoon in Carlsbad
- Agua Hedionda Lagoon in Carlsbad
- Buena Vista Lagoon in Carlsbad
- San Luis Rey River in Oceanside

The rail corridor also traverses Torrey Pines State Beach and Reserve, offering travelers extensive views of the shoreline, natural landforms and open-space areas, and coastal bluffs (Figure 5.7-1A and Figure 5.7-1B). In addition, along various portions of the rail facility, undeveloped and vegetated hillside terrain sustains the overall visual quality of the corridor.

Along the rail corridor, much of the developed area consists of coastal communities where the ocean and local beaches influence the visual setting of the area. Unlike many of the NCC inland areas east of the I-5 highway corridor, much of the developed areas adjacent to the rail corridor have retained a smaller, village-like character common of older, seaside communities.

Adjoining Views

The railway itself is a noted visual feature in some areas of the rail corridor when viewed from off-site locations, particularly where the railway traverses large open-space areas such as the corridor's lagoons and the shoreline. In Del Mar, the railway—located on a narrow portion of the coastal bluffs where the existing tracks are set between the shoreline below and residences above—provides significant views of the coastline and is also visible by individuals recreating along this area of the coast.

Existing bridges over waterbodies tend to be the most notable visual feature of the railway since these structures typically occur in more open, undeveloped areas. As the railway lies adjacent to and crosses over several natural open-space and recreation areas, it is visible to hikers, equestrians, and community park users to varying degrees, depending on the proximity of the alignment to open-space and recreation areas accessible to the public. The railway is visible from various public areas within developed areas of the rail corridor, most notably at intersections with vehicle-, bike- and/or pedestrian-crossing locations. Stations occur among developed communities in the corridor and are generally compatible with the surrounding environment.

5.7.1.2 I-5 Highway Corridor Resources

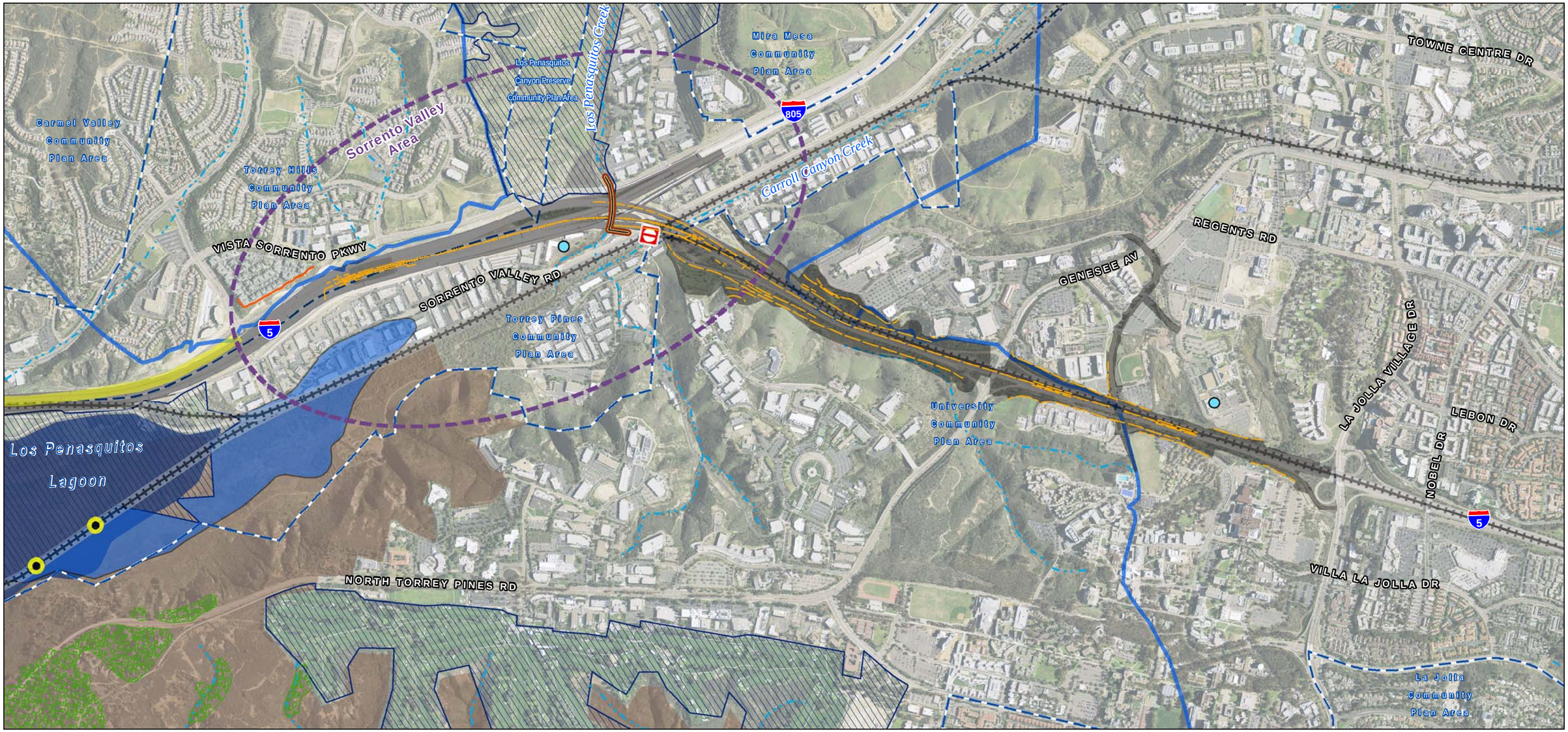
The I-5 highway corridor is part of the California Scenic Highway System and is eligible for official designation. Though located in a more inland area from the coast than the LOSSAN rail corridor, the I-5 highway corridor similarly provides travelers with a variety of significant coastal views. There are approximately 250,000 travelers per day on the I-5 highway, which serves as the primary northern gateway for visitors to the San Diego coastal area. Within the corridor viewshed, natural features such as the ocean, beaches, lagoons, coastal bluffs, canyons, agricultural fields, and natural upland areas are prominent given the quantity and type of visual resources experienced by traveling on an otherwise urban Southern California freeway.

The *I-5 NCC Project Draft EIR/EIS* (June 2010) identifies the visual setting and features of the I-5 highway corridor in detail, including the variety of developed, rural, and natural features that occur, as well as the defining characteristics and visual quality of each feature. There are a number of significant and distinct coastal visual resources that occur along the corridor, in addition to the various natural and developed visual elements that contribute to the overall visual quality of I-5 in the NCC and the surrounding area.

Traveler Views

I-5 provides access to the ocean for hundreds of thousands of people each day, a visual resource rarely experienced while traveling on a major urban freeway. Ocean views from I-5 occur at the following locations:

- Northbound lanes between Carmel Mountain Road and SR-56 (Figure 5.7-1A and Figure 5.7-1B)
- Northbound lanes between Del Mar Heights Road and San Dieguito River Bridge (Figure 5.7-1B)
- Southbound lanes between Via de la Valle and Lomas Santa Fe (Figure 5.7-1B and Figure 5.7-1C)
- Northbound lanes between Lomas Santa Fe and Manchester Avenue (Figure 5.7-1C)
- Southbound lanes between Manchester Avenue and Birmingham Drive (Figure 5.7-1C)
- Vista Point adjacent to southbound lanes north of Manchester Avenue (Figure 5.7-1C)
- MacKinnon Avenue overcrossing (Figure 5.7-1C)
- All lanes at Encinitas Boulevard (Figure 5.7-1D)
- Southbound lanes between La Costa Avenue and Poinsettia Lane (Figure 5.7-1E)
- Southbound lanes at Oceanside Boulevard (Figure 5.7-1G)
- All lanes at the San Luis Rey River bridge (Figure 5.7-1G)



NORTH

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary
- Coastal Zone Boundary

0 500 1,000 2,000 Feet

Marine Resources

- Stream/River
- Lagoon
- Torrey Pine Forest
- Torrey Pines State Reserve

Caltrans Proposed Projects

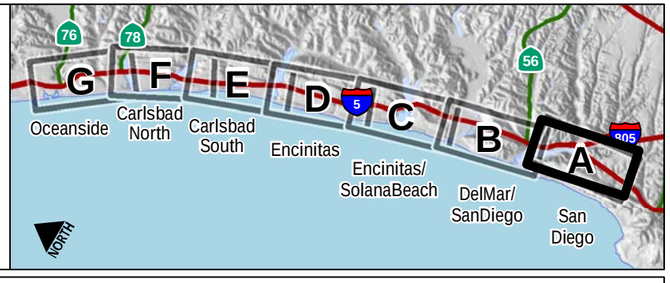
- Retaining Wall/Concrete Barrier
- Sound Wall
- Changeable Message Sign
- Closed-Circuit Television Camera
- Highway Advisory Radio
- Community Enhancement Projects

Visual Resources

- 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



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

FIGURE 5.7-1A

Visual Resources (City of San Diego)

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

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NORTH

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Proposed Platform
- City Boundary
- Coastal Zone Boundary

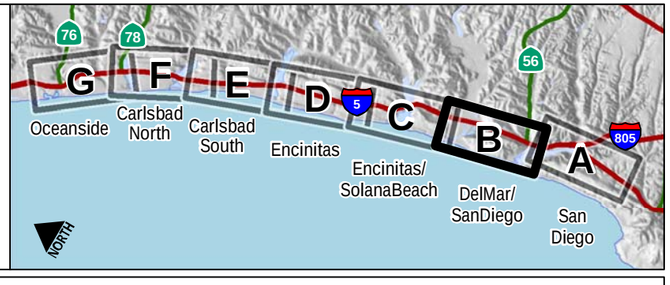
0 500 1,000 2,000 Feet

Marine Resources
- Stream/River
- Lagoon
- Torrey Pine Forest
- Torrey Pines State Reserve

Caltrans Proposed Projects
- Retaining Wall/Concrete Barrier
- Sound Wall
- Changeable Message Sign
- Closed-Circuit Television Camera
- Highway Advisory Radio
- Community Enhancement Projects

Visual Resources
- 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



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

FIGURE 5.7-1B

Visual Resources (City of Del Mar / San Diego)

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

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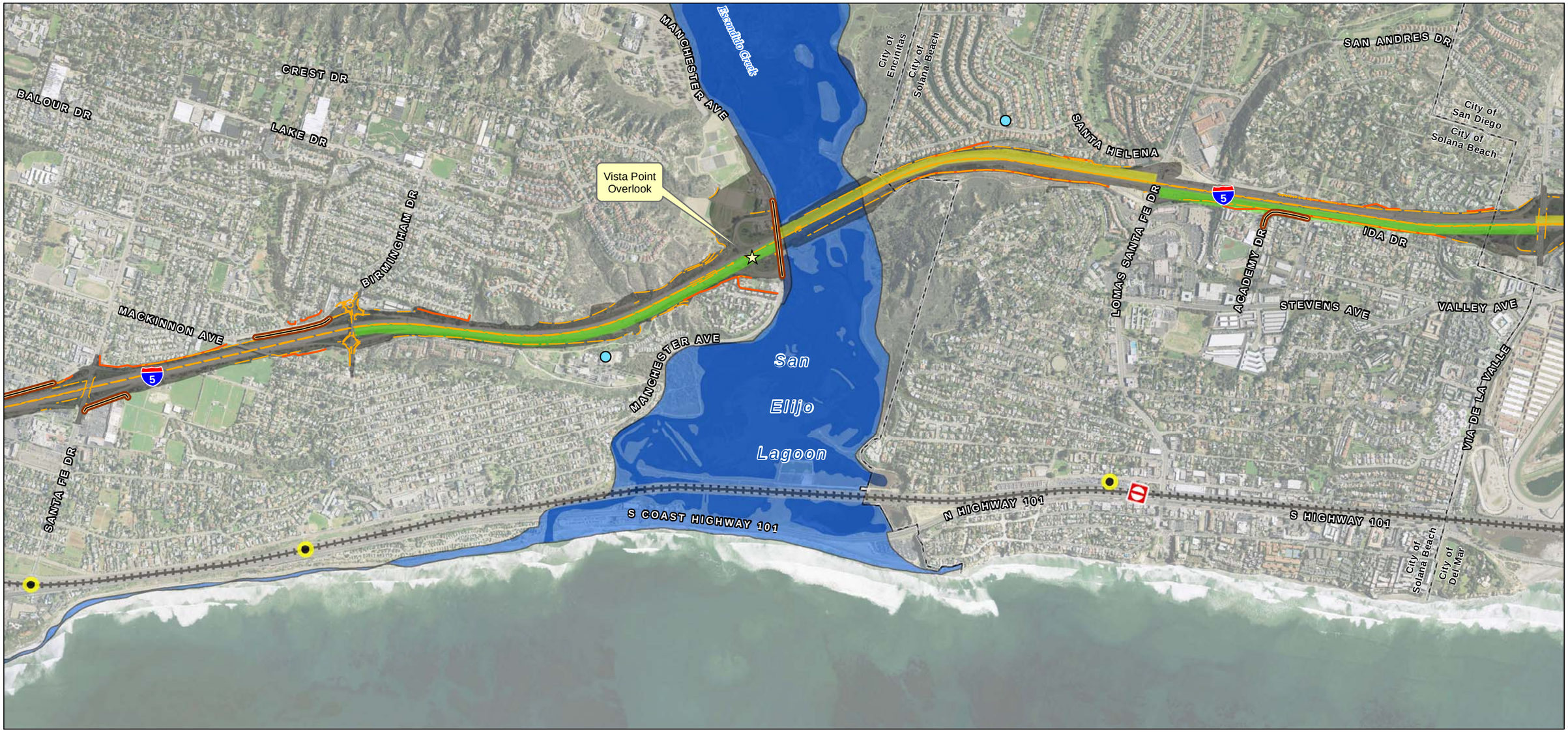


NORTH

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary
- Coastal Zone Boundary

0 500 1,000 2,000 Feet

Marine Resources

- Stream/River
- Lagoon

Caltrans Proposed Projects

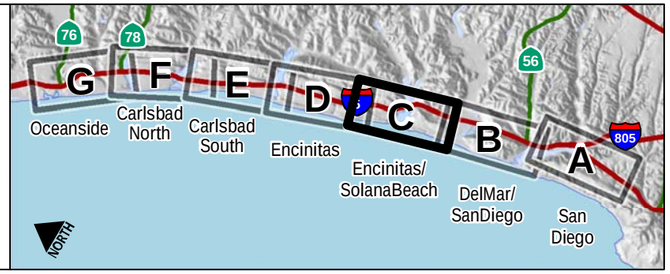
- Retaining Wall/Concrete Barrier
- Sound Wall
- Changeable Message Sign
- Closed-Circuit Television Camera
- Highway Advisory Radio
- Community Enhancement Projects

Visual Resources

- Northbound Ocean View
- Southbound Ocean View

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction



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

FIGURE 5.7-1C

Visual Resources (City of Encinitas / Solana Beach)

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

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NORTH

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary
- Coastal Zone Boundary

0 500 1,000 2,000 Feet

Marine Resources

- Stream/River
- Lagoon

Caltrans Proposed Projects

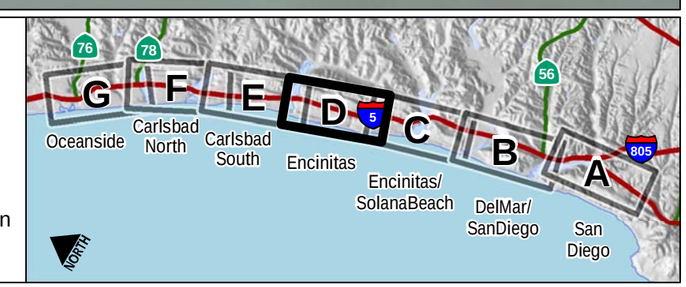
- Retaining Wall/Concrete Barrier
- Sound Wall
- Changeable Message Sign
- Closed-Circuit Television Camera
- Highway Advisory Radio
- Community Enhancement Projects

Visual Resources

- Northbound Ocean View
- Southbound Ocean View
- I-5 Scenic Community

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction



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

FIGURE 5.7-1D

Visual Resources (City of Encinitas)

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NORTH

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary
- Coastal Zone Boundary

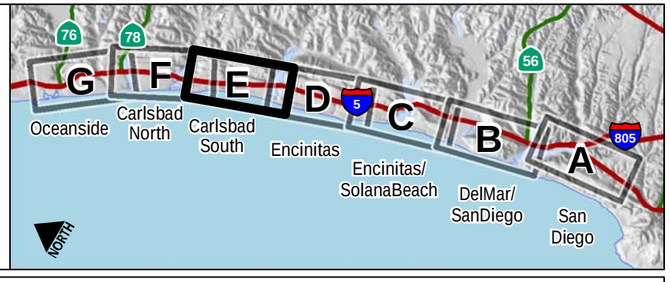
0 500 1,000 2,000 Feet

Marine Resources
- Stream/River
- Lagoon

Caltrans Proposed Projects
- Retaining Wall/Concrete Barrier
- Sound Wall
- Changeable Message Sign
- Closed-Circuit Television Camera
- Highway Advisory Radio
- Community Enhancement Projects

Visual Resources
- Northbound Ocean View
- Southbound Ocean View

Coastal Zone Permit Areas
- Coastal Commission Permit Jursidiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Elements



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

FIGURE 5.7-1E

Visual Resources (City of Carlsbad [South])

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

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NORTH

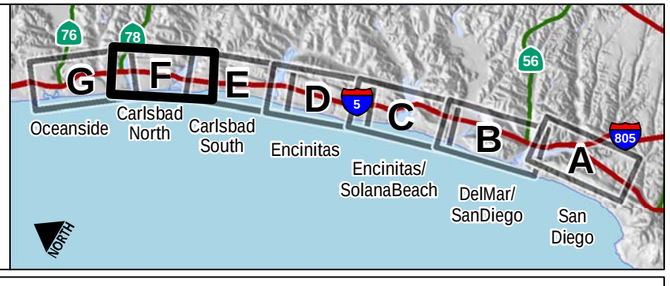
I-5 Project Area
LOSSAN Project Area
LOSSAN Overcrossing Improvements
LOSSAN Rail Station
City Boundary
Coastal Zone Boundary

0 500 1,000 2,000 Feet

Marine Resources
Stream/River
Lagoon

Caltrans Proposed Projects
Retaining Wall/Concrete Barrier
Sound Wall
Changeable Message Sign
Closed-Circuit Television Camera
Highway Advisory Radio
Community Enhancement Projects

Coastal Zone Permit Areas
Coastal Commission Permit Jursidiction
Local Coastal Program Deferred Certification
Local Coastal Program Elements



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

FIGURE 5.7-1F

Visual Resources (City of Carlsbad [North])

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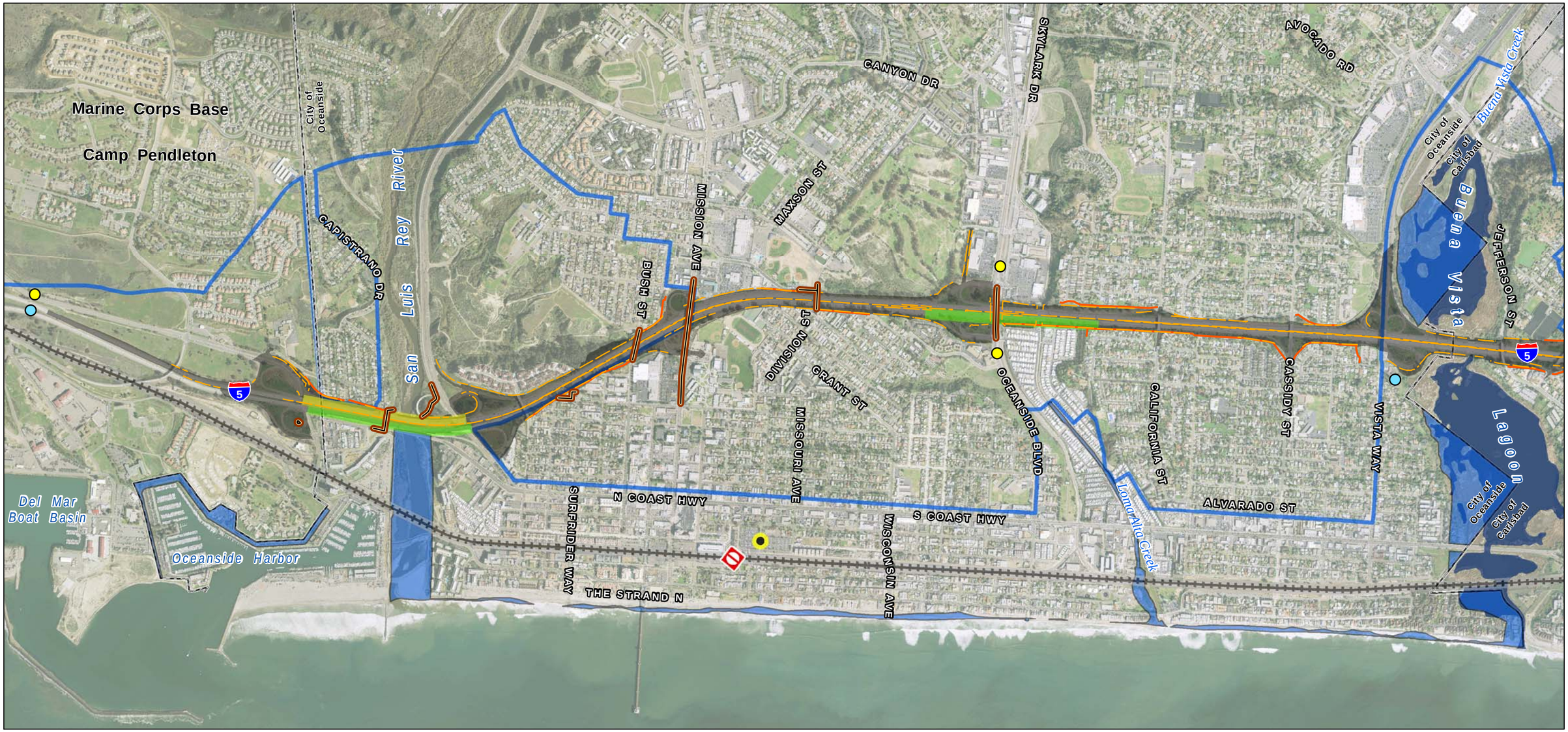


NORTH

- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary
- Coastal Zone Boundary

0 500 1,000 2,000 Feet

Marine Resources

- Stream/River
- Lagoon

Caltrans Proposed Projects

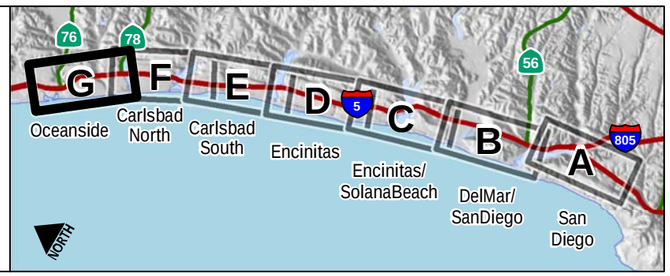
- Retaining Wall/Concrete Barrier
- Sound Wall
- Changeable Message Sign
- Closed-Circuit Television Camera
- Highway Advisory Radio
- Community Enhancement Projects

Visual Resources

- Northbound Ocean View
- Southbound Ocean View

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction



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

FIGURE 5.7-1G

Visual Resources (City of Oceanside)

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As with the LOSSAN rail corridor, the I-5 highway corridor crosses the NCC's five coastal lagoons and two river valleys at the following locations:

- Los Peñasquitos Lagoon in San Diego
- San Dieguito River in San Diego
- San Elijo Lagoon in Encinitas
- Batiquitos Lagoon in Carlsbad
- Agua Hedionda Lagoon in Carlsbad
- Buena Vista Lagoon in Carlsbad and Oceanside
- San Luis Rey River in Oceanside

Torrey Pines State Reserve is visible from the Sorrento Valley and Carmel Valley areas of I-5 and is a visual resource consisting of varying natural topography and open space areas, including coastal bluffs at the headland of Las Peñasquitos Lagoon (Figure 5.7-1A and Figure 5.7-1B). Coastal bluffs are also found near coastal beaches, lagoons, and rivers at the following locations:

- Torrey Pines State Reserve southern slopes of the San Dieguito River Valley
- Native slopes of the San Elijo Valley
- Native slopes adjacent to the northbound freeway lanes between Manchester Avenue and Birmingham Drive

Along various portions of the I-5 highway corridor, immediately adjacent undeveloped and vegetated hillside terrain (natural and manufactured slopes) provide a buffer between I-5 and adjacent land uses and sustain the overall visual quality by softening the appearance of I-5 and blocking or screening views to and from adjacent urban development. On both sides of I-5, mature trees provide vertical relief to the horizontal plane of the highway and also serve as a landscape buffer between the highway and adjacent areas. Additionally, the visual character of I-5 differs from that of standard highways due to the presence of large, flowering oleanders in the median that provide a green parkway in the center of the highway. Oleanders provide visual relief with a natural appearance and reduce the scale of the highway by half as the shrubs screen views of oncoming traffic. Median oleanders are an I-5 feature unique to San Diego, extending from the Harbor Drive interchange in Oceanside to the San Dieguito River Bridge in San Diego, and again from the Genesee Drive interchange in San Diego past the southerly project limit.

While developed areas are not typically considered significant coastal visual resources, agricultural fields situated along I-5 (near Manchester Avenue in Encinitas and Cannon Road in Carlsbad) provide views of significant open space areas and combine with adjacent lagoons to provide relief from the visual patterns of urban development along the corridor. In addition, Del Mar Racetrack and Fairgrounds is located adjacent to the ocean and is visible from the highway in the San Dieguito Valley and Solana Hills area. It is a prominent cultural feature in the corridor viewshed that provides orientation and identity unique to the area.

Development along the I-5 highway corridor consists of new, large-scale suburban development primarily located east of I-5, with older, small-scale beach communities located adjacent to and west of the highway. The *I-5 NCC Project Draft EIR/EIS* notes that the village-like character of the older communities of the Encinitas and Leucadia hillside neighborhoods that border the highway, may be considered a scenic resource by local communities. The Encinitas and Leucadia hillside neighborhoods are visible from the highway between Encinitas Boulevard and La Costa Avenue (Figure 5.7-1D). While

these developed areas do not present significant natural visual resources, the lower-density, relatively small scale, and mature landscaping associated with the communities maintain a sense of openness in the developed landscape. The neighborhoods exemplify Encinitas' unique historical identity as a center of exotic horticulture with older homes built early in the 20th century on large parcels used as avocado groves, exotic plant nurseries, or commercial greenhouse space. Despite intense urban development that has occurred elsewhere along the coast, many of the original homes, large stands of tall trees, and some of the avocado groves, nurseries, and greenhouses in the neighborhoods remain.

Adjoining Views

I-5 is a dominant visual feature in some areas of the corridor when viewed from off-site locations, particularly elevated portions of the highway, including overcrossings and bridges over waterbodies. The highway is adjacent to five natural preserves, two open space parks, five community parks, one recreational area, and one golf course. As such, the highway is visible to hikers, equestrians, and community park users depending on the proximity of the highway to these open space and recreation areas. The highway is also visible to drivers, bicyclists, and pedestrians using local streets and sidewalks at interchanges, as well as travelers along residential frontage streets (such as Orpheus Avenue in Encinitas) that have direct views to the highway.

5.7.2 TREP/PWP Concerns

Environmental documentation and analysis prepared for the TREP/PWP highway and rail corridor improvements indicate that there are significant coastal visual resources within the corridor that could be affected by the proposed improvements. The proposed transportation facility improvements would include constructing new tracks and extended paved surfaces; constructing transit stations and parking structures or lots, new or expanded bridges and bridge railings, direct access ramps (DARs), and rail tunnel portals; and would add new signage, sensors and cameras, and new retaining and soundwalls. New night-lighting at proposed stations could also create or increase a visual impact if visible from nearby scenic beaches, scenic roads, parks, and trails.

Proposed improvements could affect public views of natural coastal features such as the Pacific Ocean, coastal river valleys and lagoons, coastal bluffs, open space, and cultural landscapes, and/or could result in a more urban aesthetic in some project areas. Project grading could remove or substantially alter natural landforms, landscaping, trees, and topography (berms, hills, etc.), thus decreasing the visual openness and semi-rural character of the corridor. In addition, proposed improvements that involve new and extended facilities could increase the visual mass and overall visibility of facilities from adjacent public viewing areas, and could result in public view obstruction to visual resources in the corridor. Project appearance has the potential to disrupt the experience of the natural environment as viewed by people visiting the natural preserves and open space areas near the transportation facilities.

In addition, existing, permitted shoreline protection devices for the LOSSAN rail corridor in the Del Mar bluffs area have altered the shoreline; however; previous Coastal Commission review of the shoreline protection system included project conditions to ensure that the structures were designed and treated so as to minimize alteration of natural landforms, to protect public views, and to be compatible with the surrounding area. Future stabilizing activities, which would expand these shoreline structures for continued operation of the rail facility, could result in impacts to the visual resource of the coastline if not properly designed and maintained.

5.7.2.1 LOSSAN Rail Corridor Impact Assessment

Proposed LOSSAN rail improvements would occur in areas of the corridor with significant coastal visual resources. Potential visual resource impacts of rail improvements could include long-term operational impacts and short-term construction impacts. Long-term visual impacts could result from constructing new, permanent structures, including track and station additions, such as new parking areas or increased parking structure height, tunnel portals and grade separations, and other appurtenant features such as fencing and lighting. During construction, visual impacts could include the presence of construction equipment, the dismantling of old structures and erecting of new structures, light and glare impacts from nighttime construction, and visual contrast impacts from newly disturbed soils along the rail corridor.

Traveler Views

Proposed track improvements would include at- or below-grade facility improvements that would be consistent with existing facility improvements and the surrounding environment; however, trench and tunnel alignment options that would replace at-grade facilities could adversely affect passenger views to coastal visual resources as the transportation facility would be depressed or placed entirely below grade, thus eliminating coastal views currently available on the at-grade facility; however, as discussed further in this section, trench and tunnel alignments would benefit overall visual resources in the corridor, particularly for adjoining views, given that existing at-grade facilities could be removed in some portions of the corridor, thus restoring the visual quality of these areas presently displaced by the at-grade facilities that are visible from surrounding areas.

Grade separations for automobiles, pedestrians, and/or bicycles are proposed at Montgomery Avenue and Santa Fe Drive (Figure 5.7-1C), and El Portal Street, Leucadia Boulevard, and Hillcrest Drive (Figure 5.7-1D) in Encinitas. Grade separations and potential overpasses could create additional structural and visual mass where proposed along the corridor; however, these project features would be limited to distinct points within the existing ROW and therefore would be visible only momentarily to traveling passengers.

Station and parking improvements would include adding bypass tracks and/or new parking structures for 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 platform at Del Mar Racetrack and Fairgrounds is proposed in the San Dieguito 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.

Temporary visual impacts to traveler views associated with construction activities adjacent to and visible from the operating rail line would generally include visual contrast impacts created by active construction sites, grading, and vegetation removal.

Adjoining Views

Throughout the LOSSAN rail corridor, the double tracking at-grade improvements would have little visual impact to adjoining views as the facilities would be placed within the existing ROW and would be consistent with the existing environment and facility in those locations. Trench alignments would generally be less visible than at-grade alignments; however, where open trench sections would have to be fenced for security purposes, at-grade visual impacts to adjacent views looking to or across the ROW could occur absent appropriate fence location and design. Tunnel alignment options would generally have no impact on visual resources or area aesthetics as viewed from surrounding areas,

except at portal locations, which would be visible at those distinct locations, and the I-5 highway corridor tunnel option could create new visual impacts along the south edge of San Dieguito Lagoon where an elevated rail structure would be constructed for a portion of the track.

Grade separations proposed for intersections at Montgomery Avenue, Santa Fe Drive, El Portal Street, Leucadia Boulevard, and Hillcrest Drive, in Encinitas could introduce new structural and visual mass in these locations, which would be visible from surrounding areas and could potentially obscure public views to near and distant viewsheds; however, these crossings are currently designed as undercrossings, which would substantially minimize structural mass of the improvements and ensure that views across the facilities would be maintained. Potential overpasses could consist of elevated bridge structures and may create additional structural and visual mass where proposed along the corridor.

Bridge replacements for the rail alignment would include bridges at San Luis Rey River, Batiquitos, San Elijo, San Dieguito, and Los Peñasquitos Lagoons (under some alternatives). All bridges would be double-tracked, and widening of bridge structures for double-tracking could increase the visual mass of the structures as viewed from surrounding areas; however, in some cases, such as at San Elijo Lagoon, bridge spans may be lengthened (depending on restoration plans for the lagoon) and some bridge footprints may be reduced due to changes in bridge design and construction materials.

Station and parking improvements for the Oceanside, Carlsbad Village, Carlsbad Poinsettia, Encinitas, and Solana Beach stations could increase the scale, mass, and overall visibility of stations from surrounding areas. In addition, a new platform at Del Mar Racetrack and Fairgrounds is proposed in the San Dieguito Valley, which would introduce a new facility in an area generally characterized by open space and the rural and cultural features of Del Mar Racetrack and Fairgrounds. These improvements, if not appropriately located and designed, could obscure public views to near or distant views of the coast, inland open space areas and hillsides, or could be incompatible with the aesthetics of surrounding areas. In the case of the Miramar Hill tunnel alternative for University City, a new underground station would be constructed at University Towne Centre (UTC), which would have no impact on visual resources.

As the majority of proposed rail improvements would be at- or below-grade and within the existing ROW, visual impacts associated with landform alteration of natural terrain as viewed from adjacent areas would generally be minimal; however, grade separations, station parking improvements, the new Del Mar Fairgrounds platform, tunnel portals, and the I-5 highway corridor Del Mar tunnel option (which would include an elevated rail structure along the southern edge of San Dieguito Lagoon) would require some grading and removal of vegetation, potentially resulting in landform alteration and associated impacts to scenic views. In addition, expanding the existing shoreline protection system at Del Mar bluffs necessary to support the existing rail facility operations could result in landform alteration of the shoreline and associated impacts to the visual resource of the coastline.

Temporary visual impacts to adjoining views could also result from construction activities and would generally include visual contrast impacts created by active construction sites, grading, and vegetation removal.

5.7.2.2 I-5 Highway Corridor Impact Assessment

Traveler Views

I-5 highway corridor improvements could result in a range of traveler view impacts to distinct, coastal visual resources, and to the generally open visual quality of the corridor. Impacts to coastal visual

resources would result primarily from constructing extended paved surfaces and additional highway structures (particularly overcrossings and DARs), soundwalls necessary to mitigate noise impacts to surrounding land uses, and new retaining walls necessary to minimize the project footprint and associated grading and resource impacts.

View impacts to the corridor's most significant coastal visual resources (specifically views to the ocean, coastline, lagoons, and river valleys) would be avoided or, in large part, minimized given that these resources are typically visible across the corridor's large waterbody crossings, which provide highly scenic coastal view corridors; however, visual access to the ocean from the highway could be affected by a soundwall proposed in one location between Via de la Valle and Lomas Santa Fe Drive in Solana Beach (Figure 5.7-1C) where southbound highway travelers have a view of the ocean, San Dieguito River Valley, and Del Mar Racetrack and Fairgrounds. Figure 5.7-2 depicts the existing view and a visual simulation of the proposed transportation improvements at Ida Avenue in Solana Beach.

Constructing new DARs could also affect coastal visual resources in the corridor as viewed by highway travelers due to introducing large walls, ramp structures, widened local streets, and adding structural mass to the highway. DAR construction would result in loss of visual open space associated with agricultural areas adjacent to the highway at Manchester Avenue (approximately 18.5 acres), as shown in Figure 5.7-3, and Cannon Road (approximately 16 acres), which are contiguous to San Elijo Lagoon (Figure 5.7-1C) and Agua Hedionda Lagoon (Figure 5.7-1F), respectively. In addition to loss of visual open space, retaining walls needed to support the proposed DAR access road at Cannon Road would obstruct most highway views of the adjacent agricultural land.

The *I-5 NCC Project Draft EIR/EIS* evaluates, identifies, and depicts several other scenic views, consisting of open hillside terrain and developed areas unique to the corridor at key view sites that would be affected by proposed improvements in a number of locations. Highway travelers in both directions would lose existing views to the Encinitas hillside neighborhood west of the highway between Encinitas Boulevard and Leucadia Boulevard (Figure 5.7-4 and Figure 5.7-5).

Proposed highway improvements could also result in the I-5 highway corridor becoming a more urban facility in which the various scenic resources now available to the traveling public would become less accessible. Much of proposed highway widening would be contained within the existing ROW to minimize the facility's footprint, grading, and associated resource impacts, and therefore would require the use of retaining walls to limit encroachment of facility improvements into adjacent areas. Adding a number of retaining structures would introduce urban highway components not presently part of the highway corridor's overall visual character.

Though the proposed design minimizes the facility and grading footprint, the project would nonetheless displace existing terrain and landscaped roadside in some areas. Reduced areas for landscaping (due to space limitations for the widened facility, as well as the limitations of San Diego's coastal native tree palette) could also affect the corridor's visual character by shifting the highway's visual balance from substantial landscaping and greenery to harder surfaces with sparser vegetation, as depicted in Figure 5.7-6 and Figure 5.7-7. The prominence of tall trees and extensive landscaping in the highway landscape would be reduced and could affect the parkway setting of the highway.

Additional impacts to coastal scenic views from the highway could occur from new highway appurtenances such as changeable message signs, overhead traffic sensors, video cameras, and congestion pricing signage, which, if not appropriately located, could obstruct or detract from views of coastal visual resources. These types of features would be concentrated at or near DAR facilities and managed lane ingress/egress points (Figure 5.7-1A through Figure 5.7-1G).

Temporary visual impacts to traveler views associated with construction activities adjacent to and visible from the highway would generally include visual contrast impacts created by active construction sites, grading, and vegetation removal.

Adjoining Views

Proposed highway improvements would be contained, in large part, within the existing ROW or would be located directly adjacent and contiguous to the existing facility; however, extended and enlarged highway improvements could result in visual resource impacts associated with obstructing public views from adjacent public areas to significant coastal and inland visual resources.

Construction of new DARs would add visual mass to the facility and, as discussed above, would result in expanding transportation facilities into agricultural areas at Manchester Avenue and Cannon Road that could affect public views of open space areas adjacent to San Elijo Lagoons and Agua Hedionda Lagoons, respectively. Potential impacts to views of open space would be most notable at Manchester Avenue in Encinitas where a DAR and transit center would be constructed (Figure 5.7-3); however, the proposed DAR at Manchester Avenue would also provide expansive views of the adjacent agricultural areas and coastline to motorists that utilize the new access.

The highway's visual character from surrounding areas could be adversely affected at ROW edges where the project would bring the highway closer to recreational areas and community viewers. Existing landscaped buffers between the highway and adjacent land uses would be reduced in size (or removed altogether) and replaced with retaining walls and/or soundwalls in some locations (Figure 5.7-8). At highway interchanges, overcrossing and undercrossing structures (and some local streets) would be enlarged and could create an increased urban visual character (Figure 5.7-9). In particular, the visual experience of pedestrians and bicyclists could be affected as the balance of available circulation space shifts further from the pedestrian realm; however, community enhancements (discussed further below and detailed in Section 5.3) such as wide sidewalks, street trees, and other pedestrian amenities are proposed in coordination with affected cities to avoid or minimize these visual impacts. Proposed stormwater detention basins may introduce standard features such as maintenance vehicle roads, rock rip-rap slopes, concrete headwalls, standpipes, and chain-link fencing that could be incompatible with area aesthetics and could further reduce available landscape area.

Highway improvements could potentially result in visual impacts associated with landform alteration of natural terrain as viewed from adjacent areas. While the majority of proposed facility improvements would be contained within the existing ROW to minimize the facility and grading footprint and associated resource impacts, improvements would require adding retaining walls to limit encroachment of facility improvements to adjacent areas, thus displacing existing terrain and landscaped roadside areas visible from the surrounding area. Highway bridge improvements would not involve altering bluffs or cliffs but could require protective structures at piles and/or abutments, thus altering the shoreline characteristics of coastal lagoons and streams.

Temporary visual impacts to adjoining views could also result from construction activities and would generally include visual contrast impacts created by active construction sites, grading and vegetation removal.

FIGURE 5.7-2: I-5 IMPROVEMENTS AT IDA AVENUE (SOLANA BEACH)

Existing view of I-5 at Ida Avenue, looking southwest.

Proposed View of I-5 at Ida Avenue, looking southwest.

FIGURE 5.7-3: I-5 IMPROVEMENTS AT MANCHESTER AVENUE (ENCINITAS)

Existing view of I-5 at Manchester Avenue, looking north.

Proposed view of I-5 at Manchester Avenue, looking north.

FIGURE 5.7-4: I-5 IMPROVEMENTS AT ENCINITAS BOULEVARD (ENCINITAS)

Existing view of I-5 at Encinitas Boulevard, looking north.

Proposed view of I-5 at Encinitas Boulevard, looking north.

FIGURE 5.7-5: I-5 IMPROVEMENTS NEAR UNION STREET (ENCINITAS)

Existing view of I-5 near Union Street, looking south.

Proposed view of I-5 near Union Street, looking south.

FIGURE 5.7-6: I-5 IMPROVEMENTS AT DEL MAR HEIGHTS ROAD (SAN DIEGO)

Existing view of I-5 at Del Mar Heights Road, looking north.

Proposed view of I-5 at Del Mar Heights Road, looking north.

FIGURE 5.7-7: I-5 IMPROVEMENTS AT OCEANSIDE BOULEVARD (OCEANSIDE)

Existing view of I-5 at Oceanside Boulevard, looking south.

Proposed view of I-5 at Oceanside Boulevard, looking south.

FIGURE 5.7-8: IMPROVEMENTS AT DEVONSHIRE DRIVE (ENCINITAS)

Existing view of Devonshire Drive, looking north.

Proposed view of Devonshire Drive, looking north.

FIGURE 5.7-9: I-5 IMPROVEMENTS AT UNION STREET (ENCINITAS)

Existing view of Union Street, looking east at I-5.

Proposed view of Union Street, looking east at I-5.

5.7.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

While the proposed rail and highway improvements could affect coastal visual resources in the corridor, the majority of program improvements would occur within previously disturbed and developed areas of existing rail and highway ROW and adjacent urban land uses. The proposed rail and highway improvements would primarily consist of expansions and/or reconfigurations of existing facilities that minimize substantial encroachment into adjacent undeveloped, open space areas. The improvements would be consistent with the visual character of the existing facilities and surrounding land uses.

5.7.3.1 LOSSAN Rail Corridor Opportunities

Visual resource enhancement opportunities provided by the proposed rail improvements would include rail improvement options for trenching and tunneling through portions of the corridor that could allow for restoring open space areas presently displaced by portions of the existing facility, with an option of removing the rail service from the coastal bluffs in Del Mar and Los Peñasquitos Lagoon, which would reduce overall visibility of the rail facility and result in a beneficial impact to these coastal viewsheds. Removing the existing rail facility from Del Mar bluffs would further provide an opportunity to remove and restore the shoreline area currently occupied by shoreline protection devices, which were permitted and are maintained to ensure stability of the bluff and support continued operation of the existing rail facility.

Additional opportunities for coastal visual resource enhancements could include replacement of existing rail bridge structures, which, due to their age, are relatively dense in form and mass and presently obscure views to the ocean and/or inland areas through the bridge support structures. Rail improvements that would replace and update bridge structures could open the viewshed in some of the lagoon areas with new bridge designs that would minimize support structures and, thus, reduce the visual mass of the structure and provide a more visually permeable design.

5.7.3.2 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements 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 and coastal lagoons, and shall be designed to be compatible with existing development and surrounding areas. Project-level analysis for proposed rail improvements shall not occur, however, until after project alternatives are chosen; preliminary design, engineering, and resource impact analyses are developed; and mitigation measures and monitoring plans are prepared; therefore, analysis of the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary resource impact assessment, and design and development strategies to address potential resource impacts. The following design and development strategies provide guidance in addressing potential resource impacts for specific rail development projects, and as proposed rail improvement plans are further developed, additional design and development strategies to address coastal visual resources would be evaluated by the lead agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. Development of NCC rail facility projects should be sited and designed such that the impacts of grading, operational activities and direct light on public views outside of the transportation facilities are limited to the maximum extent feasible.
2. Project-level analysis for potential visual resource impacts of rail improvements should confirm that proposed rail improvements will minimize substantial impacts to coastal visual resources including public view corridors, community, and environmental aesthetics. Should project-level analysis find

that previously unidentified, substantial permanent or temporary impacts to visual resources will result from proposed rail improvements, additional avoidance and mitigation measures to ensure project consistency with applicable Coastal Act visual resource policies should be identified during future, project-specific federal consistency review.

3. Design solutions should be considered in the development of the final design for rail improvement projects to integrate rail infrastructure into existing landscapes and enhance project appearance to minimize visual impacts. Where feasible, design solutions may include, but not be limited to:

- Grading for all rail improvement projects should be designed to minimize landform alteration and removal of significant vegetation. Grading and ground disturbance should be the minimum necessary to construct proposed rail and station improvements, depending on chosen alignment options for any particular segment of the rail corridor.
- Replacement bridges for existing rail structures across the lagoons should be carefully evaluated and designed during project-level review as a means of mitigating potential visual impacts, as well as impacts to hydrologic and biological resources associated with the lagoons, by providing opened and expanded support structures as feasible.
- Where at-grade or depressed route segments pass through or along the edge of residential areas or heavily traveled roadways, landscape treatments such as trees, shrubs, and groundcover could be installed along the edge of the ROW to provide partial screening and to visually integrate the ROW into the surrounding context.
- Night lighting at stations should be the minimum required for operations and safety. All lights should be hooded and directed to the area where the lighting is required to minimize excess shedding of waste light. For lights that are not required to be on all the time, sensors and timers should be specified.
- Areas outside of the operating rail trackbed that are disturbed by cut, fill or grading should be seeded or planted, as feasible, such that these areas will blend with the surrounding vegetated areas. Native vegetation should be placed in appropriate locations and densities consistent with adjacent natural settings. Appropriate native or ornamental species should be used adjacent to developed and landscaped areas; however, steep areas of cut in rock may not be able to support plants.
- Review of local urban design plans and policies should be conducted to take into account local design objectives. The analyses should provide a basis for considering specific design measures that would modify the impacts of the project in ways that would make the project design more consistent with local urban design goals.

5.7.3.3 I-5 Highway Corridor Opportunities

Visual resource enhancement opportunities provided by the TREP/PWP highway improvements would include opportunities to move existing utilities underground, where feasible, thereby restoring and enhancing visual resources and reducing urbanized landscape/features along the corridor. Enhancement opportunities would also involve replacing existing facility lighting with updated, energy efficient lighting that is better directed to avoid/minimize visual impacts and nighttime glare.

In addition, TREP/PWP improvements could provide the possibility for parcels that are purchased (in whole or in part) for highway widening but not required for use as permanent state ROW to be considered as potential opportunities for community pocket parks or public open space at the request of the local agencies. The TREP/PWP also includes a Resource Enhancement Program (discussed in more detail in Sections 5.4, 5.5, and Chapter 6), which would involve acquisition and habitat enhancement of properties in the corridor that would be maintained as natural open space areas,

thereby enhancing natural open space areas that would be visually accessible from travelers in the corridor and from surrounding areas.

Further, TREP/PWP highway improvements have been evaluated and designed in conjunction with the I-5 North Coast Community Enhancement Plan, which includes community enhancement project concepts that, if implemented, would improve how the highway project interfaces with adjacent communities. These projects would also enhance communities along the I-5 highway corridor by incorporating context-sensitive design and public amenities, where feasible. The proposed community enhancement projects were identified and developed in close coordination with affected communities and included coordinating project development team meetings, developing preliminary design concepts, meeting with city officials and community stakeholders, and hosting community workshops.

Implementing community enhancement projects would depend on cooperation between members of the community, city officials, and the Caltrans design team. Pursuant to a cooperative agreement between Caltrans and the affected cities, Caltrans would construct the community enhancement projects throughout the I-5 corridor as part of highway construction, and maintenance agreements would be organized with each city, allowing future maintenance to become the responsibility of the local jurisdiction.

In addition to various improvements intended to improve public access and recreation, community enhancement projects include design elements that would directly improve visual resources along the corridor and integrate highway improvements to minimize visual resource impacts. These design elements include, where proposed, enhanced landscape buffers between the highway, trails, parking areas and community streets; new and widened sidewalks; street tree plantings; slope and parkway plantings; the creation of pocket parks; and enhanced fencing, paving, and lighting. Community enhancement design concepts are discussed in more detail in Sections 4.4 and 5.3 and are described and depicted in the I-5 North Coast Community Enhancement Plan. Example community enhancement projects with specific visual resource enhancement elements are presented in Figure 5.7-10 through Figure 5.7-13.

5.7.3.4 I-5 Highway Corridor Policies and Implementation Measures

In addition to the opportunities presented by the proposed highway, community and natural resource enhancement projects discussed above, Caltrans would implement siting and design parameters specified within the following policy and implementation measures to ensure that proposed improvements are designed, implemented and maintained to provide for maximum protection of coastal visual resources. Notice of Impending Development (NOID) submittals for highway, community and resource enhancement project implementation that would potentially impact visual resources would demonstrate compliance with the following policy and implementation measures.

Policy 5.7.1: Development of NCC transportation facility and community enhancement projects should 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 should 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.

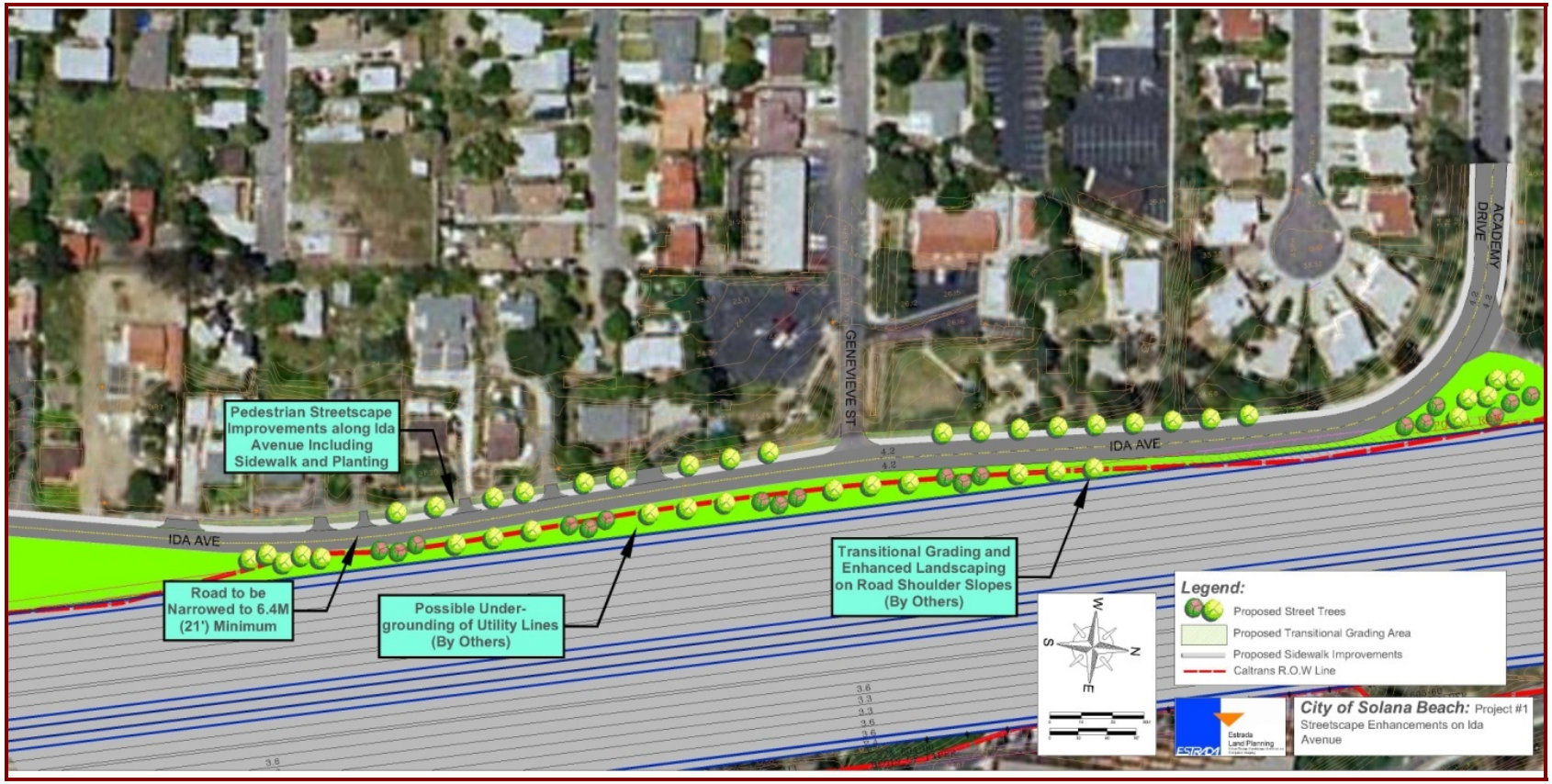
Implementation Measure 5.7.1: NOID submittals for individual highway, transit, and community enhancement projects should identify all potential visual resource impacts of project implementation, as addressed by Policy 5.7, and should detail the type and location of visual mitigation elements included

in the project as provided in Implementation Measure 5.7.2, and applicable architectural and landscape mitigation requirements, which avoid and/or minimize potential coastal visual resource impacts. NOID submittals for community enhancement projects should include the cooperative maintenance agreement with the affected city.

Implementation Measure 5.7.2: Visual resource mitigation elements for highway, transit and community enhancement project impacts should incorporate the following visual design features, as appropriate, for specific project features to ensure substantial visual resource impacts from project construction are avoided or minimized to the extent possible. NOID submittals should detail the type and location of visual mitigation elements included in the project design, which may include, as appropriate:

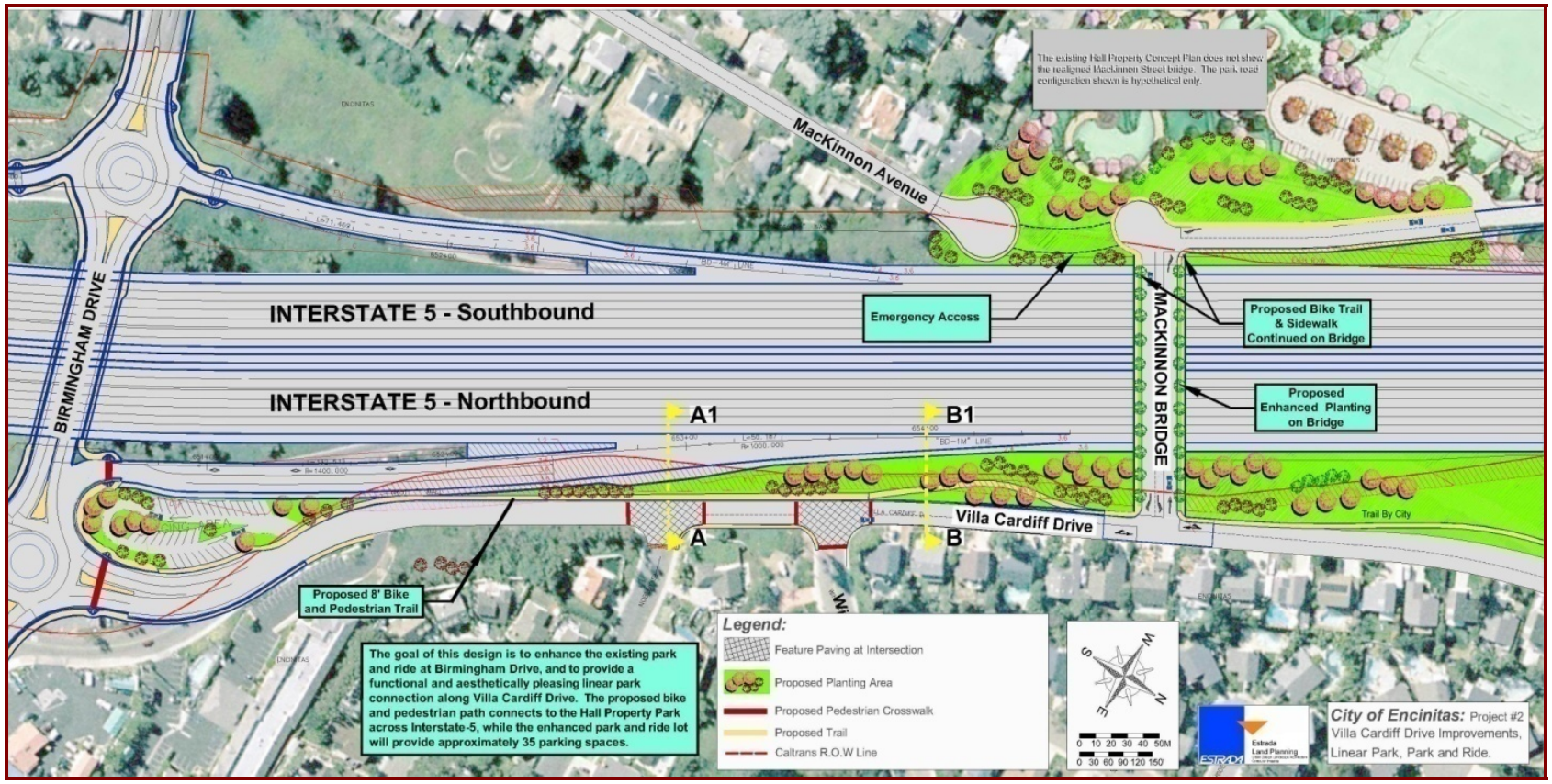
- **Sound Barriers**
  - Soundwall setbacks, landscape buffers and/or planting pockets
  - Soundwall articulated layout/varied profile
  - Transparent soundwalls on private property
  - Translucent soundwall panels on Caltrans property
  - Architectural detailing
- **Retaining Walls**
  - Retaining wall setbacks, landscape buffers and/or planting pockets
  - Terrain-contoured retaining walls in cut sections
  - Terraced retaining walls
  - Mid-Slope retaining walls in cut sections
  - Top-of-Slope retaining walls in fill sections
  - Viaduct retaining walls
  - Enhanced safety railings
  - Architectural surface treatment
  - Low Profile and See-Through Safety Barriers
- **Overcrossings, Bridges, Undercrossings and Direct Access Ramps**
  - Terrain-contoured walls with landscaped buffers and/or architectural treatment, where appropriate and feasible
  - Enhanced slope paving (color, texture, materials, etc.)
  - See-through bridge rails, where appropriate including consideration of noise impacts on wildlife
  - Enhanced sidewalks (patterns, color, textures, etc.)
  - Low profile safety barriers between pedestrian and vehicular traffic, where necessary and feasible
  - Enhanced pedestrian lighting, fencing, railing, container trees, and other urban amenities, designed consistent with local design guidelines, where feasible and where the responsible local agency has requested them and agreed to maintain them in perpetuity

FIGURE 5.7-10: STREETSCAPE ENHANCEMENTS ON IDA AVENUE (SOLANA BEACH)



Streetscape Enhancements on Ida Avenue in Solana Beach would improve existing pedestrian facilities along Ida Avenue including adding a new sidewalk on the west side with curbs, street trees and planting buffers consistent with the Eden Garden Master Streetscape Plan and Master Plan.

FIGURE 5.7-11: VILLA CARDIFF DRIVE IMPROVEMENTS (ENCINITAS)

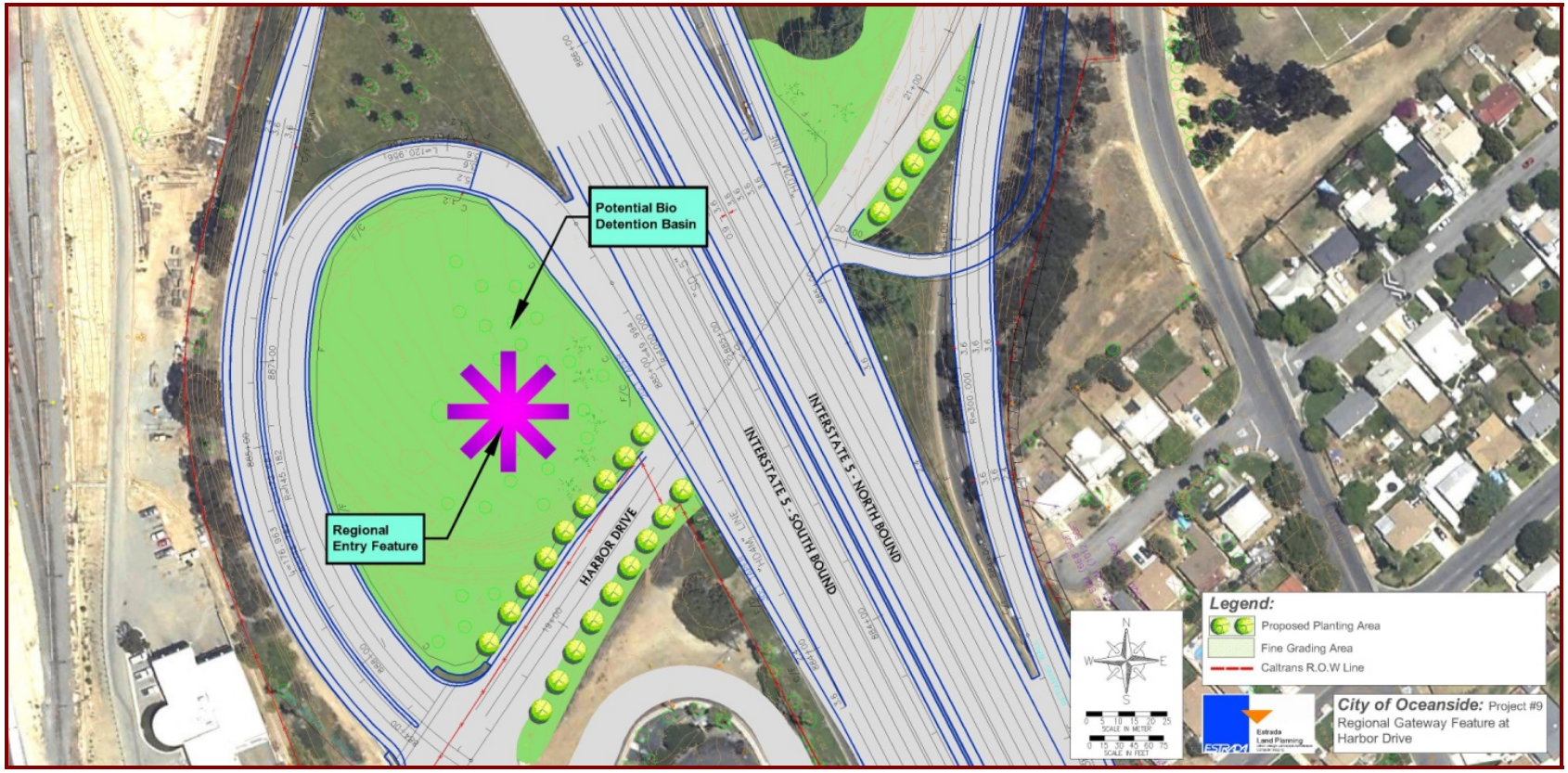


Villa Cardiff Drive Improvements in Encinitas would include sidewalks and trails connecting Hall Property Park with the east side of the highway across MacKinnon Bridge and south along Villa Cardiff Drive, and would enhance Birmingham Drive and Villa Cardiff Drive with park-like amenities, new trees, and a pedestrian connection to the north.

FIGURE 5.7-12: ENHANCED PEDESTRIAN OVERPASS CONNECTION ON BUSH STREET (OCEANSIDE)

Enhanced Pedestrian Overpass Connection on Bush Street in Oceanside would connect existing community gardens at Civic Center Drive and Witzel Street with new and widened sidewalks, community garden plots, a paved trail from the east side of the bridge along the on-ramp to Buena Street, and new and improved lighting and landscaping.

FIGURE 5.7-13: REGIONAL GATEWAY FEATURE AT HARBOR DRIVE (OCEANSIDE)



Regional Gateway Feature at Harbor Drive in Oceanside would include creative paving, evocative landscaping, and structures to reflect regional identity as an entry to Oceanside and the county.

- **Highway Interchanges**
  - Street trees, pedestrian lighting, landscaped parkways, enhanced sidewalk paving where feasible and where the responsible local agency has requested them and agreed to maintain them in perpetuity
  - Urban design features such as benches, bollards, directional signage, and trash receptacles where feasible and where the responsible local agency has requested them and agreed to maintain them in perpetuity should also be included as appropriate
  - Bicycle facilities designed consistent with the San Diego Regional Bike Plan, applicable local standards, and local jurisdiction circulation element goals, wherever possible
  - Enhanced interchange landscaping and entry features where feasible and where the responsible local agency has agreed to maintain them in perpetuity. Entry features should be included as transitional visual elements into local communities where appropriate.
- **Highway Landscape** Corridor landscaping designed consistent within the corridor and with the character of adjacent community landscape. In communities that are characterized by ornamental landscaping, highway landscaping that includes non-invasive, drought-tolerant ornamental trees, shrubs, and groundcover should be installed. In less developed areas of the corridor, landscaping with non-invasive, drought-tolerant ornamental and native trees and shrubs would be planted.
  - Native landscaping provided in all areas adjacent to native habitat, designed in consultation with the district biologist, and irrigated utilizing reclaimed water wherever possible
  - Highway planters for replacement planting within the highway facility at the edge of shoulder, between concrete median and separator barriers, or between barriers and walls wherever the available width allows
  - Median oleander preservation, replacement planting and maintenance
  - Manufactured slopes designed to support planting and irrigation (including grading techniques such as slope rounding, slope sculpting, and variable gradients to approximate the appearance of natural topography)
- **Local Frontage Roads**
  - In locations where highway widening brings traffic in close proximity to parallel local streets such as Ida Avenue in Solana Beach, Villa Cardiff Drive, Devonshire Drive, Orpheus Avenue, and Piraeus Street in Encinitas, Avenida Encinas in Carlsbad, and Brooks Street, Garfield Street, and Buena Street in Oceanside, landscape buffers should be created between the highway and street, which may include elements such as street trees and shrubs, sidewalks, and solid screen walls for access control. Including some buffers may require local street widths to be adjusted. Implementing this measure is contingent on local agency approval and commitment to maintain the streetscape buffer in perpetuity.
- **Lighting, Signage, and Miscellaneous Highway Appurtenances**
  - Lighting and signage pedestals placed at pilasters or incorporated in other architectural features, where possible
  - Concrete lighting and signage pedestals designed such that vertical barrier transitions are not required
  - Signage with movable elements or self-illuminated features such as changeable message signs would be excluded from viewsheds containing scenic resources, wherever feasible
  - Bridge signage designed to be visually integrated with bridge architecture
  - Electrical and signal equipment at ramp termini placed in visually unobtrusive locations

- Enhanced median barriers (color, texture, etc.)
- Enhanced gore paving (color, materials, etc.)
- Access control fencing placed in visually unobtrusive locations of interchanges and bridges where possible. It is recommended that the fencing be of special design and consist of enhanced materials where appropriate and maintained by the responsible local agency in perpetuity.

- **Drainage and Water Quality Facilities**
  - Landscape screening of detention basins, where feasible
  - Detention basins and bioswales designed to appear as natural landscape features such as dry streambeds or riparian pools
  - Subterranean drainage or planted geo-reinforced drainage surfaces alternatives to concrete drainages adjacent to residential areas, where appropriate and feasible
  - Concrete drainages located, designed, and colored to be unobtrusive in appearance
  - Rock slope protection consisting of aesthetically pleasing whole material of various sizes.
  - Standpipes and other vertical appurtenances placed in unobtrusive locations, wherever feasible, and painted an unobtrusive color.
  - Plantable soft-surface or segmented hard-surface alternatives to concrete ditches and rock slope protection in all project areas visible to the public, where feasible
  - Pervious concrete used for interceptor ditches, inlet aprons, gutters, maintenance access roads, maintenance vehicle pullouts, and parking lots, where feasible
  - Maintenance access drives for drainage and water quality facilities located in unobtrusive areas away from local streets and consisting of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape

Implementation Measure 5.7.3: Real estate parcels, in whole or in portion, purchased for highway widening but not required for use as permanent state ROW should be considered as potential opportunities for community pocket parks or public open space and, at the request of the responsible local agency, should be relinquished to the local agency to maintain in perpetuity.

Implementation Measure 5.7.4: Existing overhead utilities located near the highway and requiring relocation due to highway widening should be relocated underground where possible.

Implementation Measure 5.7.5: Proposed enhancements (Archaeological Treatment Plan) at the Vista Point Overlook along southbound I-5, just north of Manchester Avenue, should consist primarily of ground-level public amenities so as to not compromise the viewshed.

5.7.4 Coastal Act Consistency

Coastal Act Section 30251 provides for the protection of scenic and visual resources of the coastal zone:

> 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.

Coastal Act Section 30253(b) further provides that new development shall not require constructing protective devices that substantially alter natural landforms along bluffs and cliffs:

> New development shall do all of the following:
>
> (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.

The proposed TREP/PWP improvements would consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to the existing rail and highway facilities would generally be expansions or reconfigurations of existing facilities involving limited expansion of vertical mass beyond what currently exists. As such, the majority of TREP/PWP facility improvements would not result in substantial visual contrasts or changes to the dominant, overall form characterizing the existing visual condition of the transportation corridors as viewed throughout the corridor. Where the program improvements could result in impacts to sensitive or key coastal visual resources, the TREP/PWP includes various strategies for rail improvements and policies for highway improvements, depending on the level of project detail available and the visual resource being considered, to avoid or minimize potential impacts to significant coastal visual resources. Strategies and policies generally include evaluating and incorporating design and landscaping treatments into projects and minimizing grading, landform alteration, and vegetation removal, wherever feasible, to avoid or minimize visual resource impacts.

5.7.4.1 LOSSAN Rail Corridor Consistency Analysis

With the exception of potential tunnel alignments, all rail improvements would remain within or along the existing transportation corridor, which would substantially minimize the potential for adverse impacts to visual resources resulting from implementing the proposed track improvements. At-grade track improvements would have minimal to no impacts on public views to and along the ocean and shoreline, or to scenic inland areas for both traveler and adjoining views. While at-grade track improvements would have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations due to expansion of the facilities, the increase in improvement area would be minor, incremental and would be at or below grade consistent with the visual character of the existing facility and the surrounding environment. Trench alignments would generally be less visible than at-grade alignments; however, where open trench sections would have to be fenced for security purposes, at-grade visual impacts would need to be analyzed during project-level analysis to ensure fencing would be appropriately located and designed to avoid or minimize substantial impacts to visual resources.

Trench and tunnel alignment options that could replace at-grade facilities could adversely affect passenger views to coastal visual resources as portions of the transportation facility would be depressed or placed entirely below-grade, thus eliminating coastal views currently available from the at-grade facility; however, trench and tunnel alignments would result in a beneficial impact to overall visual resources in the corridor by placing facilities below ground, thus eliminating visibility of structures from public viewsheds. In particular, rail improvements would include an option for removal of the rail service from the coastal bluffs in Del Mar and portions of Los Peñasquitos Lagoon, which would eliminate the rail facility from these locations, potentially allowing for restoration to the coastal viewshed in these highly scenic areas.

As described in other sections of this chapter, proposed tunnel alignment option alternatives, though not decided at this time, could result in substantial, beneficial impacts to a range of coastal resources, including coastal access and recreation, marine resources, environmentally sensitive habitat areas, and safety and stability. At-grade and trench alignments potentially function as barriers to, or cause conflict with, vehicle, bicycle and pedestrian traffic, and wildlife movement. In Del Mar, a tunnel option would remove the rail line from the Del Mar Bluffs, which are susceptible to failure and unable to accommodate double tracking due to the significant excavation, stabilization, and ongoing maintenance needs for existing shoreline protection devices, which could in turn affect shoreline processes, water quality, and sensitive habitats. Additionally, one tunnel option would run under I-5 before returning to grade along the southern bluffs of San Dieguito Lagoon, thus avoiding Los Peñasquitos Lagoon where the existing lagoon crossing structure would be removed from service. All tunnel options for Del Mar and the University City area would reduce direct and indirect impacts to waterbodies and sensitive habitat areas (except at tunnel portals) as all surficial construction and operational impacts would be avoided.

Improvements to benefit visual resources associated with the Del Mar tunnel options would be most notable within the coastal scenic areas of the Del Mar bluffs, and potentially Torrey Pines State Beach and Reserve and Los Peñasquitos Lagoon. The Camino Del Mar tunnel option would remove the existing rail service from Del Mar bluffs, resulting in an improvement to area aesthetics and the coastal viewshed. While the two Camino Del Mar tunnel portals would have some visual impact, the impact would be within the urban environment and/or along the existing rail ROW and would not substantially alter existing aesthetics. The I-5 tunnel option would also remove the existing tracks from the Del Mar bluffs, and would remove the existing railway crossing in Torrey Pines State Beach and Reserve, and Las Peñasquitos Lagoon, improving views of the beaches, bluffs, and the lagoon. This tunnel option, however, could create new visual impacts along the south edge of San Dieguito Lagoon where an elevated rail structure would be constructed for a portion of the track. As with the Camino Del Mar tunnel options portals, the I-5 tunnel option portals would also have some visual impact; however, potential impacts would similarly occur along the existing rail ROW and would not substantially alter existing aesthetics of the area.

Pedestrian-grade separations are proposed for major intersections in Encinitas at Montgomery Avenue, Santa Fe Drive, El Portal Street, and Hillcrest Drive; a vehicular-grade separation is proposed at Leucadia Boulevard. These crossing are currently designed as undercrossings, which would substantially minimize structural mass of the improvements and maintain views across the facilities. Potential overpasses could consist of elevated bridge structures that could create additional structural and visual mass; however, as noted previously, proposed grade separations and potential overpasses would be limited to distinct points within the existing ROW and therefore would not be readily visible to traveling passengers. Although overpasses could add structural mass at affected intersections, the structures occupy already developed areas with major intersections and, thus, would not be visually incompatible with the existing aesthetics. In addition, potential overpasses would not include extensive vertical structural elements and therefore are not likely to substantially obscure significant coastal or inland viewsheds; however, project-level analysis would be conducted to ensure potential overpasses are designed to avoid substantial impacts to visual resources.

Bridge replacements for the LOSSAN rail corridor would include bridges at San Luis Rey River, Batiquitos, San Elijo, San Dieguito, and Los Peñasquitos Lagoons (under some alternatives). All bridges would be double-tracked and in some cases, such as at San Elijo Lagoon, bridge spans could be lengthened (depending on restoration plans for the lagoon), and the bridge footprint reduced due to changes in bridge design and construction materials. Widening of bridge structures for double-tracking could increase the visual mass of the structures as viewed from surrounding areas; however, this

potential visual impact could be offset by new, concrete bridge designs that would be smaller in scale with fewer support structures than the existing trestle bridges, thus allowing for a more visually permeable design. Proposed bridge replacements could improve visual resources of lagoon and river open space areas by removing the existing timber-trestle bridge-support structures, which are relatively dense in form and mass and presently obstruct adjoining views to coastal and inland areas in these locations. This would restore views of the ocean through new bridge designs for travelers along I-5, and restore views to the ocean and inland foothills for people using adjacent open space areas.

Station and parking improvements would include adding bypass tracks and/or new parking structures for the Oceanside, Carlsbad Village, Carlsbad Poinsettia, Encinitas, and Solana Beach stations. These improvements would occur at 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 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. In the case of the Miramar Hill tunnel alternative for University City, a new underground station would be constructed at University Towne Centre (UTC), which would have no impact on visual resources.

Existing, permitted shoreline protection devices for the rail corridor in the Del Mar area have altered the shoreline; however; previous Coastal Commission review of the shoreline protection system included project conditions and clarifications to ensure that the structures were designed and treated to protect natural landforms and visual resources. Future stabilizing activities would be subject to further Coastal Commission review to ensure that the structures were designed and treated to protect natural landforms and public views.

As the majority of proposed rail improvements would be at- or below-grade and within the existing ROW, visual impacts associated with landform alteration of natural terrain would generally be minimal; however, grade separations, station parking improvements, the Del Mar Fairgrounds platform, tunnel portals, and the I-5 Del Mar tunnel option (which would include an elevated rail structure along the southern edge of San Dieguito Lagoon) would require some grading and removal of natural terrain, potentially resulting in temporary landform alteration. Significant and highly visible landform alteration of natural terrain is not expected, however, given that the majority of these improvements would be largely limited to ROW areas or in tunnels, and would occur in existing developed and relatively level areas. Tunnel alignment options could result in additional beneficial visual improvements, except at portal locations, as they would avoid surficial construction and operational impacts that would otherwise be visible from surrounding areas.

The TREP/PWP includes design and development strategies to minimize potential visual resource and aesthetic impacts, which would be further evaluated during project-level analyses for rail improvements pursuant to future environmental and/or phased federal-consistency review, when applicable. The design and development strategies generally include minimizing grading, landform alteration, and vegetation removal (in consideration of chosen alignment options); providing landscape treatments such as trees, shrubs, and groundcover along the edge of the ROW to provide partial screening and to visually integrate the ROW into surrounding areas; addressing potential night lighting impacts by limiting, shielding and directing lights to only that required for operations and safety; and implementing native revegetation efforts for areas disturbed by grading activities.

The design and development strategies further include reviewing and considering local design objectives (in consultation with local agencies) for developing specific design measures during project-level analyses to provide consistency, wherever feasible, with local urban design goals. These analyses would guide proposed station architecture, parking lots, lighting systems, and other features to blend with the surrounding landscape, which would reduce the visual impacts of the stations on their surroundings.

5.7.4.2 I-5 Highway Corridor Consistency Analysis

View impacts from proposed highway improvements to the corridor's most significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided or minimized. These resources are typically visible across or below the corridor's large lagoon and river bridges that provide visual access to these highly scenic view corridors. These view corridors would continue to be bridged and generally would not require large soundwalls or retaining walls that could obstruct existing views; however, views to the ocean from the highway could be affected by a soundwall proposed in one location between Via de la Valle and Lomas Santa Fe Drive in Solana Beach where southbound highway travelers currently have a view of the ocean, San Dieguito River Valley, and Del Mar Racetrack and Fairgrounds.

Constructing new DARs could also affect coastal visual resources in the corridor as viewed by highway travelers and from adjacent properties; however, DARs proposed at Oceanside Boulevard and Voigt Drive in San Diego would not result in substantial impacts to coastal visual resources. The proposed DAR at Oceanside Boulevard would be located outside the Coastal Zone in a developed area not highly visible from within the Coastal Zone and thus would not affect coastal visual resources. The proposed DAR at Voigt Drive in San Diego would be partially located within the Coastal Zone, but would also occur in a highly developed area with adjacent land uses consisting of the University of California, San Diego campus and other urban uses. Views from the highway and adjoining views would be affected by introducing large walls, ramp structures, and widened local streets; however, the DAR structure would not obscure a significant public viewshed, and the structure would not be incompatible with the urbanized landscape of the surrounding area.

Constructing new DARs at Cannon Road and Manchester Avenue would add visual mass to the facility and expand some transportation facilities into adjacent agricultural areas, which would affect open areas viewed from both the highway and adjoining areas. DAR construction would result in loss of visual open space associated with agricultural areas adjacent to the highway at Cannon Road (approximately 14 acres) and Manchester Avenue (approximately 18.5 acres), which are contiguous to Agua Hedionda and San Elijo Lagoons, respectively. Retaining walls needed to support the proposed DAR access road at Cannon Road would obstruct most highway views of the adjacent agricultural land.

Potential impacts to views of open space would be most notable at Manchester Avenue in Encinitas where proposed improvements would consist of a transportation complex, including a DAR and transit center with access road, parking for 400 cars, and a bus platform. The improvements would add structural mass to the existing facility and would result in a new transit facility located in an open agricultural area, and would therefore reduce open space area associated with the agricultural area contiguous with San Elijo Lagoon; however, the scenic bluffs, hillside terrain, the upper agricultural fields located on the northbound slope above San Elijo Lagoon, and the lagoon would remain undisturbed and visible from the highway and the majority of the surrounding area. The improvements would generally be situated below the level of the existing ground plane to minimize visibility of the improvements from the highway. Site amenities for transit users at Manchester Avenue would not involve constructing large, massive structures, but would include covered bus shelters with minor site

amenities and enhancements, including pedestrian lighting, benches, litter receptacles, tree grates, bollards, and bicycle racks. Landscaping and enhanced pedestrian paving would be an integral part of the station features.

Proposed highway improvements would be located, in large part, within the existing ROW directly adjacent and contiguous to the existing facility. Highway improvements are not expected to result in substantial visual resource impacts associated with obstructing public views from adjacent public areas to significant coastal and inland visual resources. The highway is located some distance from the shoreline where views of the ocean and coastline from surrounding public areas are already very distant. While the highway is an existing visual feature within the viewsheds of the lagoons and river valleys it crosses, improvements to the highway, which are linear in nature, would not be significant enough to substantially affect public views through these viewsheds to the coastline or inland foothills.

The highway's visual character from surrounding areas could be adversely affected at ROW edges where the project would bring the highway closer to recreational areas and community viewers. Existing landscaped buffers between the highway and adjacent land uses would be reduced in size or removed altogether and replaced with retaining walls and/or soundwalls in some locations. At highway interchanges, overcrossing and undercrossing structures (and some local streets) would be enlarged and could create an increased urban visual character. In particular, the visual experience of pedestrians and bicyclists could be affected as the balance of available circulation space shifts further from the pedestrian realm. Proposed stormwater detention basins would involve standard features such as maintenance vehicle roads, rock rip-rap slopes, concrete headwalls, standpipes, and chain-link fencing that could be incompatible with area aesthetics and could further reduce available landscape area. Community enhancement projects that include enhanced landscape buffers between the highway, trails, parking areas and community streets; new and widened sidewalks; street tree plantings; slope and parkway plantings; creation of pocket parks; and enhanced fencing, paving and lighting are proposed in coordination with affected cities to avoid or minimize these visual impacts.

Proposed highway improvements would generally result in a more hardened landscape along I-5 with additional road surface, access ramps, sound and retaining walls, and other urban features such as signage and lighting. Project improvements could affect travelers' views to adjacent landforms and developed areas unique to the corridor, and could remove areas of significant vegetation. TREP/PWP implementation measures require that project features such as terrain-contoured retaining walls, planting pockets, median landscaping, enhanced bridge design, specific bridge railing design, landscape buffer planting at the top of walls, and widened sidewalks and landscaped parkways be incorporated into the project to minimize impacts to coastal visual resources and to reflect the visual character and goals of each affected community.

Highway bridge improvements would not involve altering significant landforms such as bluffs or cliffs but could require protective structures at piles and/or abutments along the shoreline of coastal lagoons and streams; however, these improvements would only occur in shoreline areas already altered by existing bridge structures. In addition, proposed bridge replacements would replace existing lagoon bridges that have steep, narrow abutments with new bridges designed with a bench at the abutment to facilitate wildlife movement as well as use by hikers, which would also serve to soften the appearance of the shoreline where new bridge construction would be necessary.

Implementation measures require that soundwalls be visually compatible with the surrounding community. Architectural detailing such as pilasters, wall caps, interesting block patterns, and offset wall layouts would be used to add visual interest and reduce the apparent height of the walls. Poured-in-place, integrally colored concrete construction techniques would be encouraged where visual

consistency with retaining walls is desired. Enhanced surface materials such as mosaic tile and weathering steel would also be used where appropriate.

Implementation measures also provide for use of retaining walls that follow the contours. Where feasible, walls would be located at mid-slope to achieve visual compatibility with surrounding terrain and provide room at the base for a slope that contains landscape screening. Where site conditions are favorable, retaining walls would be divided into separate structures sufficiently offset from one another to create a planting area between the two. Retaining walls would also be located at mid-slope wherever possible in cut sections to provide a buffer area for landscape screening between the wall and the highway. In areas where insufficient space exists to include planting buffers between highway retaining walls and adjacent community features such as frontage roads, the use of viaduct retaining walls would be considered, which would cantilever the roadway to form a wall recess in which spatial articulation and planting can occur. In areas where retaining walls must be placed close to the traveled way, space would be reserved between the wall and the safety barrier to include a 1.5-m (5-foot)-wide planting pocket.

Implementation measures also require various architectural treatments and provide for the use of architectural features, textures, and integral concrete colors to mitigate the appearance of retaining wall surfaces. Walls would incorporate architectural features such as pilasters and caps to provide shadow lines, provide relief from monolithic appearance, and reduce their apparent scale. Enhanced surface materials such as mosaic tile and weathering steel would also be used where appropriate to meet community design goals.

Generally, landscaping would include non-invasive, drought-tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought-tolerant ornamental and native trees and shrubs would be planted, and areas adjacent to native habitat would receive native landscaping designed in consultation with the Caltrans district biologist. While the highway improvements would change the overall visual character of the I-5 highway corridor, TREP/PWP implementation measures would substantially reduce potential impacts to visual resources. Example architectural treatments and landscaping as implemented at the recently constructed Lomas Santa Fe Drive interchange are presented in Figure 5.7-14 and Figure 5.7-15.

While the visual character if the I-5 corridor would be affected by proposed TREP/PWP improvements, TREP/PWP implementation measures ensure that project design and development would minimize impacts to the visual quality of the corridor consistent with Section 30251 of the Coastal Act. In addition, view impacts to the corridor's most significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided, with the exception of one location where visual access to the ocean, the San Dieguito River Valley and Del Mar Racetrack would be obscured for southbound travelers between Via de la Valle and Lomas Santa Fe Drive in Solana Beach. This impact would be adequately mitigated by TREP/PWP implementation measures, which would place a transparent soundwall in this location. While transparent panels would not fully preserve these views, these features would reduce the apparent height of the soundwall and create a greater sense of openness. Further, implementation measures are included to ensure that low profile (e.g., Caltrans Type 60S) or see-through (e.g., Caltrans Type 80) safety barriers be used (where feasible and unless noise abatement is necessary for protected bird species) in areas where standard height barriers would diminish views of scenic resources from the highway.

FIGURE 5.7-14: ARCHITECTURAL TREATMENT OF RETAINING WALLS ON LOMAS SANTA FE DRIVE (SOLANA BEACH)

Retaining walls at the Lomas Santa Fe Drive interchange in Solana Beach resemble the eroded sandstone bluffs that characterize this scenic coastal community. The natural wall treatments are further emphasized with the use of weathering steel accents and railings.

FIGURE 5.7-15: LOMAS SANTA FE DRIVE LANDSCAPING IMPROVEMENTS (SOLANA BEACH)

Lomas Santa Fe Drive Landscaping Improvements in Solana Beach demonstrate the visual and functional benefits of incorporating non-invasive drought-tolerant ornamental trees, shrubs, and groundcover into project design.

Although incremental loss of open space areas directly adjacent to the highway could occur as a result of proposed facility widening and constructing new DARs and the Manchester transit station, these improvements would be located adjacent to, and contiguous with, the existing highway facility and the surrounding arterial network; therefore, impacts to visual open space would be limited to the periphery of the open space areas. TREP/PWP implementation measures provide for substantial community enhancement projects throughout the corridor pursuant to cooperative agreements with affected cities, which would enhance visual resources in adjacent communities, create new park and open space areas, and provide new physical and visual access to significant coastal resources via pedestrian and bike trail improvements. In addition, the Resource Enhancement Program of the TREP/PWP (as detailed in Section 5.5) provides for acquiring and restoring properties within the corridor to enhance water quality, wetland, and upland habitat areas, which would also serve to restore and improve visual resources of natural areas. As such, TREP/PWP improvements and implementation measures would enhance open space and natural features and associated visual resources and, thus, would fully mitigate the incremental loss of open space areas adjacent to the highway due to facility widening and constructing DARs and the Manchester transit center.

The I-5 highway corridor program signage would generally include changeable message signs and congestion-pricing signage and would be placed so as not to obstruct significant viewsheds. Any new signage along the project corridor would be consistent with standard agency design, which is generally unobtrusive to the surrounding environment. In addition, TREP/PWP improvements would provide an opportunity to replace existing facility lighting with updated, energy efficient lighting better directed to avoid or minimize visual impacts to adjacent areas and nighttime glare. TREP/PWP implementation measures require existing utilities be placed underground, where feasible, thereby enhancing visual resources and reducing urbanized landscape/features where possible.

During construction of rail and highway improvements, visual impacts could include the presence of construction equipment, dismantling old structures and erecting new structures, light and glare impacts from nighttime construction work, and visual contrast impacts from newly disturbed soils along the rail corridor. These impacts would be temporary, with most occurring only during active construction periods along the corridor. Soil contrast impacts would last longer, but weathering of disturbed soils and revegetation would minimize the duration of these potential impacts. The TREP/PWP includes implementation measures within Section 5.4 that address water-quality issues associated with construction staging and debris, disturbed soils, and timely revegetation/landscaping, which also address temporary construction impacts to visual resources.

5.7.4.3 Coastal Act Consistency Analysis Summary

Based on available project and environmental data, and the design/development strategies and policies and implementation measures included herein, the proposed TREP/PWP improvements would protect views to and along the ocean and scenic coastal areas, and would be visually compatible with the character of surrounding areas through employing sensitive site design, restoring and enhancing areas adjacent to and affected by corridor improvements, avoiding significant development encroachment into adjacent areas and landform alteration, and by applying measures to avoid and/or substantially reduce potential impacts to coastal visual resources; therefore, the TREP/PWP is consistent with Sections 30251 and 30253(b) of the Coastal Act.

5.7.5 Local Coastal Program Consistency

Appendix A includes Local Coastal Program (LCP) Policy Consistency Analysis matrices, which evaluate TREP/PWP consistency with the visual resource protection policies of each LCP area that

would be affected by the proposed highway corridor improvements, and by those rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and thus fall under the exclusive jurisdiction of Surface Transportation Board (STB), the LCP policy consistency analysis may provide guidance or background information for analyzing rail project consistency with Sections 30251 and 30253(b) of the Coastal Act, as appropriate and applicable (see Section 1.1.3 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). The corridor's LCP visual resource policies are summarized with brief City-specific consistency analyses below; which also integrate and supplement the above consistency analysis for Sections 30251 and 30253(b) of the Coastal Act. A complete list of LCP policies and corresponding consistency analysis is included in the LCP Policy Consistency Analysis matrix for each City (Appendix A).

5.7.5.1 Local Coastal Program Consistency Analysis Summary

All of the LCPs include policies that mirror, in part, the requirements of Sections 30251 and 30253(b) of the Coastal Act, which require that scenic and visual qualities of coastal areas be protected, that new development be sited and designed to protect views to and along the ocean and scenic coastal areas, that natural land forms be minimally altered and be visually compatible with the character of surrounding areas, and that constructing protective devices that would substantially alter natural landforms along bluffs and cliffs not be required.

However, the certified LCPs also include a range of additional, detailed, and city-specific policies and development standards that address potential impacts to visual resources. Common policy requirements within the LCPs include:

- Minimizing grading and removal of vegetation
- Revegetating graded and disturbed areas with native, drought tolerant plant species
- Moving utilities underground
- Avoiding grading and development on steep slopes or unique topographic features, where feasible
- Ensuring that new development is subordinate to the natural environment and that adequate buffers or transition zones (such as increased setbacks, landscaped barriers, greenbelts, open space, berms, and/or decorative walls) are provided between new development, and in some cases, particularly for transportation corridors, and adjacent open space and community areas
- Protecting significant natural features including bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views, where feasible
- Protecting views of the ocean, coastline and significant coastal resources
- Protecting open space areas
- Locating and designing site amenities such as fencing, retaining walls, signs, and lighting such that they do not obscure public viewsheds and are visually compatible with surrounding land uses.

City of San Diego

The City of San Diego LCP contains an extensive set of visual resource protection policies in the North City Land Use Plan, in addition to each of the five individual Community Plans affected by the proposed TREP/PWP improvements. The City's LCP includes several policies that address potential visual resource impacts associated with grading by requiring and/or recommending special grading techniques that minimize the appearance of substantial landform alteration (sculptured techniques, restoring previously graded or scarred hillsides, following natural contours, etc.). The LCP policies also focus heavily on buffer and landscape treatments to ensure development compatibility with existing

land uses. The LCP, with its collective plan components, includes visual resource policies that are particularly unique to this portion of the corridor as follows:

- **North City Land Use Plan**
  - Encourage preserving Torrey Pine trees in private as well as public areas.
  - Encourage planting Torrey Pine trees in roadways and other landscaped areas.
  - Promote street tree planting and beautification programs. Existing street trees should be protected.
  - Prevent the destruction or removal of any tree, the trunk of which exceeds six inches in diameter, whether situated on public or private property. Where removal of any such tree is unavoidable under the circumstances (e.g., a diseased tree), adequate replacements should be required.
- **University Community Plan**
  - Protect and take maximum advantage of the Torrey Pines Subarea's topography and unique natural vegetation.
  - Ensuring that developments do not intrude into the designated open space areas.
  - Preserving existing mature trees. When feasible, development should occur around and in between mature trees. If that is not feasible, consideration should be given to moving trees into temporary nurseries during construction. Transplanting is usually less expensive than buying new trees of equal size for the site.
  - Planting trees in dense clusters to preserve and enhance the existing wooded character of this subarea.
  - Preserve the natural finger canyons, which characterize the Miramar Subarea.
  - Protect Rose and San Clemente canyons as natural regional resources, and preserve the open space character of the various finger canyons that traverse the subarea.
- **Torrey Pines Community Plan**
  - Future development adjacent to the Torrey Pines Reserve Extension, San Dieguito Lagoon, and Crest Canyon areas shall provide for adequate buffer areas.
  - Those disturbed areas of the Carroll Canyon Creek Corridor shall be revegetated and planted with a combination of native trees, primarily riparian woodlands species and native shrubs.
  - All mature trees and other significant existing vegetation in this system (Carroll Canyon) shall be protected, including the riparian habitat located in the existing concrete-lined channels.
  - The Plan recommends preserving Torrey Pines trees in private as well as public areas, and encourages planting Torrey Pines trees in roadways and other landscaped areas. Should Torrey Pines trees require removal, relocating or replacing the trees shall occur whenever feasible.
- **Torrey Hills Community Plan**
  - Prohibit encroachment and impacts of adjacent development, both private and public, on areas designated open space.
  - The visual impact of all hillside development shall be minimized, with buildings, retaining walls and other improvements approximating to the natural landforms.
  - Plant materials placed on any ridges or edges shall reinforce its natural profile and character.
  - Slopes that are visible from surrounding communities shall be treated to imitate the natural topography.

- The top and toe of manufactured slopes should be rounded to make a natural transition to pad areas.
- Where soils and geologic conditions permit, utilize variable slope ratios to aid in achieving a more natural topography.
- Decorative/enhanced paving should be used at major intersections, monuments and points of interest.
- Planting shall be designed in a manner that effectively enhances existing views or provides new view corridor opportunities into the open space corridor, major landforms or other visual amenities within the project.
- Within perimeter areas of development, landscaped buffers shall be provided to screen views of development from Los Peñasquitos Canyon Preserve.
- Landscaping in areas adjacent to Los Peñasquitos Canyon Preserve shall utilize native and/or drought tolerant, non-invasive plant material.

- **North City Future Urbanizing Framework Plan**
  - Outside the compact communities, the street edge should be designed to retain existing natural features and limit site improvements to landscape elements.
  - Retain existing land forms, mature trees, and important rock outcroppings. The locations of driveways and utilities should avoid destroying important natural features.
  - Where streets cross the open space system, bridge structures should be used to cross canyons.
  - Minimize the use of sound attenuation walls by careful site planning that employs grade changes, berms and landscape elements to provide acoustical and visual privacy.
  - When sound attenuation walls must be used, they should not be visible from major arterial and collector streets. This may be accomplished by use of grade changes, berms and/or planted buffers between the wall and street, with a width of 50–100 feet recommended for the buffer.
  - Development adjacent to ridges and bluffs shall minimize visual impacts to these topographic features through setbacks and landscaping, especially near major canyons or valleys.
  - Structures located within the view of the park, if within 200 feet vertically and 50 feet horizontally of a ridgeline, shall be set back and be low in profile so as not to be visually prominent from the future park.

TREP/PWP improvements would protect views to and along the city's most significant viewsheds including Torrey Pines Reserve, San Dieguito Lagoon, and the large adjacent canyons in this area. In addition, with sensitive site design, and the design and development strategies and policies and implementation measures included in the TREP/PWP, rail and highway development would be compatible with adjacent developed and open space areas. In addition, community enhancement projects included in the TREP/PWP would provide opportunities, in cooperation with the City, to enhance visual access to the city's significant natural resources via improved trail facilities to and from Peñasquitos Creek and Lagoon.

Proposed highway improvements would generally be designed and implemented consistent with the City's visual resource protection policies; however, the City's LCP, with its collective Community Plan components require that new development not intrude into designated open space areas, as specified within the University Community Plan, and that all mature trees and other significant existing vegetation in Carroll Canyon be protected, as specified in the Torrey Pines Community Plan. In addition, the City's LCP prohibits encroachment and impacts of adjacent development, both private and public, on areas designated as open space within the Torrey Hills Community Plan. These visual resource policies do

not include variance for special project features or circumstances. As such, although proposed highway improvements have been designed to limit encroachment into areas containing open space, mature trees, and significant vegetation, it is not feasible to completely avoid these resources as required by the City's LCP. As such, these policy requirements present potential conflicts that may require amendment to ensure consistency of the TREP/PWP improvements with the certified LCP. SANDAG and Caltrans may seek amendments to the City of San Diego LCP, for which the standard of review would be Sections 30251 and 30253(b) of the Coastal Act. As discussed in the Coastal Act consistency analysis above, the proposed improvements would be consistent with Sections 30251 and 30253(b) of the Coastal Act; therefore, if required, LCP amendments would provide for consistency of the TREP/PWP improvements with the city's LCP.

City of Del Mar

The City of Del Mar LCP includes policies that address visual resources associated with views to and along the shoreline, and, particularly the city's coastal bluffs, and views of wetland areas including Los Peñasquitos and San Dieguito Lagoons. In addition, the city's visual resource policies speak often to ensuring that new development preserves the small town character of the community. The following policies provide guidance in analyzing potential visual resource issues associated with proposed rail improvements that fall under PWP requirements:

- Preserve Del Mar's fragile coastal bluffs as a visual resource and avoid the risks to life and property associated with bluff failure and shoreline erosion.
- The BSC (Bluff, Slope, and Canyon) Overlay Zone is designed…to preserve the scenic sandstone bluffs and related canyons and steep slopes, which characterize the area within the zone. These unique landforms provide visual relief and diversity within the City, and they define and separate neighborhoods and communities physically, thereby enhancing the overall quality of Del Mar's coastal environment.
- Enhance public improvements along appropriate bluff top areas, which provide significant scenic vistas when such improvements are not in conflict with bluff preservation policies. Improvements shall include installing benches for scenic viewing at the western terminus of 11th, 8th, and 4th Streets and along the upper bluff area south of Del Mar Canyon.
- Retain the bluff top areas west of the railroad right of way between the southern border of the city and 15th Street in an open space condition to provide panoramic ocean views; to provide lateral access along the coastal bluff top; and to preserve and protect the adjacent fragile and scenic bluffs.
- Preserve views of the Pacific Ocean from Camino del Mar through applying scenic view easements and related view preservation restrictions.
- Preserve views of the Los Peñasquitos Lagoon and the Pacific Ocean from Carmel Valley Road through applying scenic view easements and related view preservation restrictions.
- Retain and enhance the views of San Dieguito Lagoon along Jimmy Durante Boulevard and San Dieguito Drive through applying scenic view easements and related view preservation restrictions.
- Park and open space systems should be protected from adjacent land uses that may infringe on scenic views.
- New or redevelopment projects within the Lagoon Overlay Zone shall include retaining the maximum amount of native vegetation on the site. Revegetation of sites within the Lagoon Overlay Zone shall include the use of non-invasive, drought tolerant species native to the San Diego coastal region and which are compatible with adjacent wetland habitat species. Landscape plans

including their associated berms, planters and fences shall also be designed to minimize the disruption of view corridors from public roadways and parks.

- The viewsheds of the San Dieguito and Los Peñasquitos Lagoons shall be preserved and protected through applying the following criteria into the design of new and redevelopment projects within the viewshed areas of the San Dieguito and Los Peñasquitos Lagoons, respectively.
  - Compatibility of design with the existing and desired character of the surrounding area;
  - Design of buildings to be subservient to the natural terrain; and
  - Considering views from the lagoon and the surrounding roadways in the landscape and structure design.
- The review of projects within the specified viewsheds shall be conditioned to ensure continued conformity with the criteria listed herein. Such conditions shall include but are not limited to recorded view corridor easements or restrictions.
- The improvement or establishment of alternative transportation modes shall be designed to protect sensitive resources and retain the small-town scenic qualities of Del Mar.

As discussed in detail in the Coastal Act consistency analysis above, some proposed rail improvements would provide the opportunity for overall enhancement and restoration of visual resources in the corridor by placing facilities below ground, thus eliminating visibility of ROW structures from public viewsheds in the coastal bluff area of Del Mar and portions of Los Peñasquitos Lagoon.

The proposed rail improvement program includes design and development strategies that would protect views to and along the shoreline, Los Peñasquitos and San Dieguito Lagoons, and would ensure rail development compatibility with surrounding land uses within Del Mar. Project-specific location, design, and development strategies would be further evaluated during project-level analyses for rail improvements pursuant to future environmental and/or phased federal-consistency review, when applicable. The design and development strategies generally include minimizing grading, landform alteration and vegetation removal (in consideration of chosen alignment options), providing landscape treatments, considering local design objectives, in consultation with local agencies, for developing specific design measures during project-level analyses to provide consistency, wherever feasible, with local urban design goals. These analyses would serve to guide proposed station architecture, parking lots, lighting systems, and other features to blend with the character of Del Mar.

The visual resource-protection policies of the City of Del Mar LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and therefore would not require that these policies be amended to implement the proposed transportation facility improvements.

City of Encinitas

The City of Encinitas LCP designates I-5 as a scenic highway and identifies a visual corridor on I-5 at San Elijo Lagoon. Unique to the City's LCP are policies that specifically address visual resources along the I-5 corridor that discourage urbanization and further include:

- Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semirural living within the I-5 View Corridor and within other view corridors, scenic highways and vista/view sheds as identified in the Resource Management Element.
- Discourage development that would infringe upon scenic views and vistas within the I-5 corridor.

- Where it is necessary to construct retaining or noise-attenuating walls along the I-5 corridor, they should be constructed with natural-appearing materials and generously landscaped with vines, trees, and shrubbery.

The City's LCP also addresses development along major arterials and includes policies to enhance, harmonize with, and not detract from the natural features of the surrounding area including the following:

- Design roads to enhance scenic areas.
- Promote and encourage roadside and median landscaping.
- The City will initiate and pursue the landscaping of appropriate median and parking areas with trees on all new and existing arterial streets.
- Type and physical characteristics of roadway should be compatible with natural character of corridor, and with the scenic highway function.

In addition, the City of Encinitas LCP includes special visual resource protection policies for the following vista points that provide views to coastal and inland viewsheds:

- Orpheus Street Park site
- Oak Crest Park site
- West end of "0" Street
- West end of "F" Street
- West end of "J" Street
- Leucadia Beach State Park
- West end of "I" Street
- Moonlight State Beach
- Swami's City Park
- Existing Vista Point on southbound 1-5
- Cardiff Beach State Park (south parking lot)

The City's visual resource policies speak often to ensuring that new development preserves the semi-rural character of the community. Additional policies included in the City's LCP address preserving natural features and mature trees to protect visual resources:

- Significant natural features shall be preserved and incorporated into all development. Such features may include bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views.
- Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semirural living within the I-5 view corridor and within other view corridors, scenic highways and vista/view sheds as identified in the Resource Management Element.
- The City will make every effort possible to preserve significant mature trees, vegetation, and wildlife habitat within the Planning Area.
- Mature trees shall not be removed or disturbed to provide public ROW improvements if such improvements can be deferred, redesigned, or eliminated. This policy is not meant to conflict with

the establishment of riding/hiking trails and other natural resource paths for the public good, or with the preservation of views.

- The City will develop a program to preserve views that also preserves the appropriate vegetation and removes obstacles that affect views. Trees and vegetation, which are themselves part of the view quality along the public ROW, will be retained.

TREP/PWP improvements would protect views to and along the ocean and San Elijo lagoon, and would not adversely affect the City's designated vista points that provide views to coastal and inland viewsheds. In addition, applying sensitive site design, and the design and development strategies and policies and implementation measures included in the TREP/PWP, rail and highway development would be compatible with surrounding developed and open space areas within Encinitas. In addition, community enhancement projects included in the TREP/PWP would provide opportunities, in cooperation with the City, to enhance visual resources and create new scenic viewing areas by constructing trail and sidewalk improvements that would provide continuity in physical and visual access to and around San Elijo Lagoon.

Proposed highway improvements would generally be designed and implemented consistent with the City's visual resource protection policies that specifically apply to I-5 and/or transportation facilities; however, the City's LCP requires that new development preserve and incorporate significant natural features, such as bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views. In addition, the City's LCP specifically states that "mature trees shall not be removed or disturbed to provide public ROW improvements if such improvements can be deferred, redesigned, or eliminated". Although proposed highway improvements have been designed to limit encroachment into areas containing natural drainage courses, wetland and riparian areas, steep topography and mature trees to the maximum extent feasible, it is not feasible to completely avoid these resources as required by the City's LCP policies. As such, these policy requirements present potential conflicts that may require amendment to ensure consistency of the TREP/PWP improvements with the certified LCP. SANDAG and Caltrans may seek amendments to the City of Encinitas LCP, for which the standard of review would be Sections 30251 and 30253(b) of the Coastal Act. As discussed in the Coastal Act consistency analysis above, the proposed improvements would be consistent with Sections 30251 and 30253(b) of the Coastal Act; therefore, if necessary, LCP amendments would provide for consistency of the TREP/PWP improvements with the city's LCP.

City of Carlsbad

The City of Carlsbad LCP incorporates Sections 30251 and 30252 of the Coastal Act into the LCP and recommends several actions to address visual resource issues within the City, including:

- Sign control
- Parking requirements
- Implementing the Scenic Preservation Overlay Zone of the City of Carlsbad on the Occidental Land, Inc. property
- Preserving natural vegetation on steep slopes

The City's Scenic Preservation Overlay Zone is applied throughout the Carlsbad coastal zone to assure the maintenance of existing views and panoramas. The LCP indicates that development should undergo individual review to determine if the proposed development will obstruct views or otherwise damage visual resources of the area by considering appropriate height limitations and see-through construction, and by minimizing alterations to topography.

The LCP identifies I-5 as a major coastal access route and notes that visual resources of property adjacent to I-5 are of particular concern. The LCP indicates that visual access to over more than 80% of the Carlsbad coastline is unobstructed because of public ownership and the LCP strictly prohibits public improvements that would obstruct visual access to the coastline.

The LCP also identifies Batiquitos Lagoon as an important visual resource and requires that the visual quality of the lagoon be protected by ensuring that new development provide for adequate setbacks, preservation of slope areas, preservation of lagoon and riparian habitats, enhancement of the lagoon environments, and controlled grading. In addition to these provisions, the LCP further notes that the following measures should be implemented to further address the scenic and visual character of Batiquitos Lagoon:

- La Costa Avenue should be established as scenic corridor pursuant to the City of Carlsbad General Plan Scenic Highway Element.
- Scenic corridor status shall be pursued for any public roadway to be established along a part or the entire lagoon north shore.
- Existing, mature, healthy vegetation, such as eucalyptus stands, shall be preserved where possible.
- Off-site signing along public roadways shall be prohibited.
- View points shall be established along the north and south shore areas (if and where environmentally sound and physically possible) to provide varied visual access to the lagoon.
- Development shall be clustered to preserve sensitive habitat areas and maintain the maximum amount of permanent open space feasible. At a minimum, the following policy shall regulate development in areas adjacent to the lagoon:
  - Existing mature trees shall be preserved.

TREP/PWP improvements would protect views to and along the ocean and other scenic coastal areas, including Buena Vista and Batiquitos Lagoon, and would ensure rail and highway development compatibility within the City of Carlsbad through site design, and by applying design and development strategies and policies and implementation measures to avoid and/or minimize potential visual resource impacts.

In addition to protecting existing visual resources in the city, community enhancement projects included in the TREP/PWP would provide opportunities, in cooperation with the City, to enhance visual resources and create new scenic viewing areas. A new trail facility would be constructed on the west and east sides of I-5 at Agua Hedionda Lagoon, which would greatly enhance viewing opportunities around the lagoon. Viewing opportunities at Batiquitos Lagoon would also be enhanced by adding a new nature center with interpretive exhibits, lagoon overlooks, new and/or improved trails, landscaping, and lighting.

However, the City's LCP requires that new development adjacent to Batiquitos Lagoon shall be regulated such that existing mature trees are preserved. While proposed highway improvements have been designed to limit encroachment into areas containing mature trees adjacent to Batiquitos Lagoon to the maximum extent feasible, it is not feasible to completely avoid removal of some nonnative woodland areas (generally consisting of Eucalyptus, pine trees, and/or pepper trees) in this area. As such, this policy requirement presents a potential conflict that may require amendment to ensure consistency of the TREP/PWP improvements with the certified LCP. SANDAG and Caltrans may seek amendments to the Carlsbad LCP, for which the standard of review would be Sections 30251 and 30253(b) of the Coastal Act. As discussed in the Coastal Act consistency analysis above, the proposed

improvements would be consistent with Sections 30251 and 30253(b) of the Coastal Act and therefore, if necessary, LCP amendments would provide for consistency of the TREP/PWP improvements with the city's LCP.

City of Oceanside

The City of Oceanside LCP includes policies that address the San Luis Rey River as a significant visual resource and requires new development to be sited and planned in a manner that retains the aesthetic values of the environment and to include design themes that complement the natural setting and history of the area (rustic, Spanish or Early California Mission design). The LCP seeks to establish viewing opportunities of the river and regulate on-site signs that would detract from the visual quality of the area and cause excessive glare or annoyance to surrounding properties.

The City of Oceanside LCP also protects visual resources by maintaining existing view corridors through public ROWs. The LCP encourages development of viewing areas at the Pacific Street Linear Park, the Buena Vista Lagoon Fishing area (provided by Eaton Hill developers) and from the frontage road between Highway 78 and the inland portion of Buena Vista Lagoon, and identifies the city's visual orientation to the Pacific Ocean as a major identity factor for the City of Oceanside. The LCP further addresses protection of view corridors and overall visual resources through the following policies:

- Removing Obstructions
  - No fencing, signage, planting, or structures should be placed in a way that will obstruct a view corridor. (Maintain existing view corridors through public rights-of-way.)
  - Visibility of major destination and other orientation points should be enhanced through signage, planting and upgrading of site and structure design
  - Proposed new development should consider surrounding views when designing building height.
- Framing/Directing Views
  - Fencing, signage, planting and structures shall be placed in a way that 'frame' a view and enhance it, directing the observer's eye to the view.
  - Street rights-of-way carried through to the water and views along the waterfront provide a desirable sense of contact with the water.
- Screening of Unpleasant Views
  - Trash bins, utility equipment, parking lots should be screened or softened by attractive fencing and/or planting.
  - Remove or obscure distracting, cluttering elements.

TREP/PWP improvements would protect views to and along the San Luis Rey River, the ocean and other scenic coastal areas, and would ensure rail and highway development compatibility within the City of Oceanside through site design, and by applying design and development strategies and policies and implementation measures to avoid and/or minimize potential visual resource impacts. In addition to protecting existing views to and along the San Luis Rey River, community enhancement projects included in the TREP/PWP would provide opportunities, in cooperation with the City, to enhance visual resources and create new scenic viewing areas along the river. These opportunities would include constructing a new parking area, trailhead staging area, and other support amenities that would support the existing San Luis Rey bike path; enhancing the existing underpass under I-5 at San Luis Rey Drive with pedestrian access improvements; improving lighting and plantings; and installing public artwork.

The visual resource protection policies of the City of Oceanside LCP do not present potential policy conflicts for the proposed TREP/PWP improvements; therefore, these policies would not need to be amended to implement the proposed transportation facility improvements.

5.8 SITE STABILITY AND MANAGEMENT

5.8.1 Corridor Setting

The NCC parallels the Southern California coastline and is located in a region where transportation infrastructure is vulnerable to a variety of natural hazards, including threats from earthquakes, landslides, storm waves, and flooding. The coastal bluffs, beaches, lagoons, and steep hillsides within the corridor are particularly subject to erosion and potential instability due to heavy rains and, in the case of coastal bluffs, beaches, and lagoons, wave uprush associated with winter storms.

Transportation infrastructure must ensure the safety of its users in light of both natural and operational hazards. As travel demand grows, improving and maintaining safe rail and highway facilities will be an ongoing and important priority for the region; thus, proposed program improvements must be designed to assure stability and structural integrity. In addition, a key safety consideration for the TREP/PWP would focus on reducing or eliminating potential conflicts between and among people, automobiles, and trains. As discussed in more detail in Section 5.3: Public Access and Recreation, proposed TREP/PWP improvements would provide numerous new or upgraded rail and highway facility crossings to address and reduce potential conflicts between and among people, automobiles, and trains along the corridor, thereby facilitating safe coastal access and recreation opportunities in the corridor.

5.8.1.1 Geology, Soils, Seismicity, and Topography

The corridor's geology, soils, seismicity, and topography are documented in the *LOSSAN Final Program EIR/EIS* (September 2007) for the LOSSAN rail corridor improvements, and a Preliminary Geotechnical Report, prepared by Caltrans' Office of Geotechnical Design South 2 (OGDS2) for the proposed NCC improvements, the findings of which are incorporated into the *I-5 NCC Project Draft EIR/EIS* (June 2010). The Preliminary Geotechnical Report presents the results of preliminary geotechnical reviews consisting of archival research of pre-existing data, field reconnaissance, and preliminary analysis and recommendations for the proposed highway improvements.

Geology/Soils

The NCC traverses terrain comprising three predominate and repetitive geologic features: 1) through cuts in relatively young marine terrace, sandstone, and shale formation; 2) artificial fills; and 3) unconsolidated lagoonal alluvium.

Natural and artificial cut slopes along the corridor are primarily composed of Torrey Sandstone and Delmar Formation. Torrey Sandstone is porous and permeable, and therefore susceptible to erosion. Delmar Formation is considered to be poorly bedded and indurated, consisting of sandy clay stone interbedded with medium- to coarse-grained gray sandstone; therefore, steep unprotected slopes are susceptible to erosion. These formations are generally capable of supporting large stable cut slopes at a 1:2-foot (vertical to horizontal) inclination and may support much steeper temporary excavations. The borrow soil derived from these units is generally well suited for use as engineered embankment fill.

The largest features of engineered artificial fill in the corridor occur where rail and freeway embankment fill has been placed at lagoon crossings. Numerous other, smaller fill areas exist elsewhere along the corridor. Highway fills have slopes at 1:2-foot (vertical to horizontal) inclination and appear to be performing well. Large areas of embankment settlement along the highway corridor have been observed and determined to be the result of settlement of the underlying alluvium.

Lagoonal Alluvium consists of lagoon sediments that are composed of weak, poorly consolidated, sand, silt, clay, and gravel with more consolidated soil at depth. These relatively weak soils may be subject to settlement and bearing capacity failure as evidenced at the highway corridor where 6 to 9 feet of settlement of the finished embankment was recorded.

Seismicity

The seismicity of southern California is dominated by the intersection of the north-northwest trending San Andreas Fault system and the east-west trending Transverse Ranges Fault system. The corridor is subject to ground shaking associated with earthquakes on faults of both these systems.

Major fault expressions near the corridor include the San Andreas, San Jacinto, Elsinor, and Rose Canyon Fault Zones. Additionally, a complex system of northwest trending faults offshore from San Diego, which includes the Coronado Banks and San Diego Tough Faults, are seismic sources that may cause minimal to moderate shaking in the corridor. The closest active major fault to the corridor facilities is the Newport Inglewood/Rose Canyon East Fault, which runs offshore in a northwest trend and then comes onshore in La Jolla, just south of the corridor, and runs to Mission Bay.

Seeps, springs, ephemeral streams, and perched water have been identified within the corridor, generally occurring at the toe of slopes and embankments, at the contact between permeable sandstone and impermeable shale, within cut slope faces, at grade, and within canyons crossed or traversed by the rail and highway facilities; therefore, it is anticipated that saturated older and younger alluvium deposits will underlie the proposed improvement areas, which are considered liquefiable from the surface to depths on the order of 50 to 60 feet. This includes alluvial deposits underlying the existing bridge structures and the embankment fills. Areas underlain by Quaternary terrace material as well as all bedrock units are not considered liquefiable due to their high density, clay content, age, and/or unsaturated conditions.

Topography

Landforms in the corridor are comprised of a series of uplifted and incised wave-cut terraces that parallel the coastline. East-west trending river valleys and drainages dissect the terraces and convey ephemeral streams and perennial rivers and streams west to the ocean. Terrace elevations are typically 328 feet or less, while stream and lagoon elevations are at, or slightly above, sea level. The lagoons and rivers in the corridor represent broad topographic lows that occur at semi-regular intervals along the corridor. These topographic lows are subject to tidal flow and episodic flooding arising from hinterland storm runoff. Steep topography in the corridor is commonly the result of landform incision by the generally westward flowing drainages, resulting in oversteepened slopes in some areas of the corridor. Steep slopes and bluffs resulting from beach side erosion and wave action occur adjacent to the LOSSAN rail corridor in Del Mar and Encinitas.

Existing rail and highway improvements traverse lagoons, marine terraces, small canyons, and drainages in a series of through-cuts and fill embankments. Natural slopes along the corridor demonstrate a maximum slope of approximately 1:3-foot (vertical to horizontal) inclination. Existing cut slopes are typically at 1:2-foot inclination (vertical to horizontal) and are up to 148 feet high. The cut slopes primarily expose Torrey Sandstone and are considered relatively stable.

5.8.1.2 Drainage and Flood Areas

Hydrologic resources of the corridor are documented in the *LOSSAN Final Program EIR/EIS* for the LOSSAN rail corridor improvements and Location Hydraulic Studies (February 2008/February 2009)

prepared for the *I-5 NCC Project Draft EIR/EIS*, which incorporate the results of the Hydrologic Engineering Centers Rivers Analysis System (HEC-RAS).

The TREP/PWP improvement areas parallel the coastline throughout Northern San Diego County, residing entirely within the coastal region of the San Diego Basin and traversing surface streams and floodplains along with lagoons, small canyons, and drainages. The improvement areas cross four of the 11 hydrologic units (HUs) within the San Diego Regional Water Quality Control Board (RWQCB) Basin. These HUs include San Luis Rey, Carlsbad, San Dieguito, and Los Peñasquitos. The corridor's surfaced hydrology is primarily influenced by five lagoons, five creeks, and the San Luis Rey River.

The San Luis Rey watershed is the largest of the four HUs within the corridor and is drained by the San Luis Rey River. The Carlsbad HU comprises seven sub-basins that include San Elijo Lagoon (Escondido Creek), Cottonwood Creek, Batiquitos Lagoon (San Marcos Creek), Encinas Creek, Agua Hedionda Lagoon (Agua Hedionda Creek), Buena Vista Lagoon (Buena Vista Creek), and Loma Alta Creek. The San Dieguito HU drains into the San Dieguito River. The corridor begins near the middle of the Los Peñasquitos HU and crosses Carroll Canyon Creek, Los Peñasquitos Creek, and Carmel Valley Creek.

In addition to the large watershed features described above, the corridor includes several small drainages and culverts that convey minor year-round flows attributable to urban runoff and/or perched groundwater seepage. All of the significant hydrologic features in the corridor receive runoff from both natural and developed areas.

Floodplains are land next to a waterbody that becomes covered by water when the waterbody overflows its banks. The zone of interest for the analysis of hydrologic resources in this TREP/PWP evaluation is defined as a special flood hazard area (SFHA) or Zone A, which is the flood insurance rate zone that corresponds to the 100-year flood hazard area in the hydrologic resource study area.

Floodplains encompass floodways, which are the primary areas that convey flood flows. Typically, floodways are channels of a stream, including any adjacent areas such as lagoons, floodplains and smaller streams that must be generally kept free of encroachment so that the 100-year flood can be carried without substantial increases to flood heights. The area between the floodway and the 100-year floodplain boundary is referred to as the floodway fringe. According to guidelines established by the Federal Emergency Management Agency (FEMA), an increase in flood height in the floodway due to any encroachment in the floodway fringe areas may not exceed 12 inches, provided that hazardous velocities are not produced in the water body.

As delineated by FEMA, 100-year floodplains in the study area are associated with significant drainage channels, riparian areas, and lagoons. Significant surface waters noted along both the rail and highway corridors include floodplains of Soledad Canyon Creek, Los Peñasquitos Creek, San Dieguito Lagoon, San Elijo Lagoon, Batiquitos Lagoon, Agua Hedionda Lagoon, Buena Vista Lagoon, Loma Alta Creek, and San Luis Rey River. In addition, Carmel Valley Creek, Cottonwood Creek, and Encinas Creek have been identified as significant water features for the highway facility.

5.8.1.3 Shoreline Erosion

Through Del Mar, as well as a limited portion of Encinitas, existing and proposed LOSSAN rail corridor improvements occur along, and adjacent to, coastal bluffs and are therefore subject to shoreline/coastal bluff erosion and retreat. In addition, many of the rail and highway bridges cross waterbodies that may also be subject to shoreline erosion, particularly the corridor's lagoons and river

systems. In general, shoreline erosion is controlled by a combination of marine, fluvial, and subaerial erosion. Marine erosion results from the effects of the ocean and wave action along beaches and/or the base of coastal bluffs. Fluvial erosion results from the force of running water in creeks, streams, and rivers. Subaerial erosion results from erosional influences that exist above the high-water line and includes erosion due to surface runoff, groundwater seepage, wind, pedestrian traffic, rodent activity, and slope instability.

5.8.1.4 Hazardous Wastes

The *LOSSAN Final Program EIR/EIS* for the Lrail corridor improvements cites the following available databases and information that were reviewed to identify the extent and nature of known hazardous materials/hazardous waste sites to assess potential hazardous materials risks:

- **Federal National Priorities List/Superfund:** This U.S. Environmental Protection Agency (EPA)-developed database lists sites that pose an immediate public health hazard, and where an immediate response to the hazard is necessary. These listings are also found in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) database, also known as CERCLIS (Title 42 U.S.C. Chapter 103).
- **State Priority List:** Sites listed in this Department of Toxic Substances Control (DTSC) and RWQCB database are priority sites that were compiled from Annual Workplan (AWP) and CAL-SITE databases, and sites where Preliminary Endangerment Assessments were conducted by the California Environmental Protection Agency (CEPA). The AWP database lists contaminated sites authorized for cleanup under the Bond Expenditure Plan developed by the California Department of Health Services as a site-specific expenditure plan to support appropriating Hazardous Substance Cleanup Bond Act funds.
- **State of California Solid Waste Landfills:** The landfill sites listed in this database generally have been identified by the state as accepting solid wastes. This database includes open, closed, and inactive solid waste disposal facilities and transfer stations pursuant to the Solid Waste Management and Resource Recovery Act of 1972 and is maintained by the California Integrated Waste Management Board. The locations of the disposal facilities are primarily identified through permit applications and local enforcement agencies.

The following reports were prepared for the proposed highway improvements and are incorporated into the *I-5 NCC Project Draft EIR/EIS*:

- *Site Investigation, Lead Investigation on Route 5 from Via de la Valle to Leucadia Boulevard, San Diego, Solana Beach, and Encinitas, California*, KP R57.9/R68.7 (PM R36.0/R42.7). Geocon Consultants, Inc., dated June 22, 2001.
- *Aerial Deposited Lead Investigation, Contract No. 43A0012, Task Order No. 11-07830K-VW, Route 5 Between Leucadia Boulevard and Brooks Street, San Diego County California*. PM 42.7/R51.2. KP R68.7/82.4. PSI, dated June 28, 2001.
- *Limited Phase II Environmental Site Assessment Interstate 5 Expansion, Del Mar Heights Road to Birmingham Drive, San Diego California*. November 15, 2005.
- *Phase II Environmental Site Assessment Interstate 5 Expansion, Birmingham Drive to Vandergrift Boulevard, San Diego California*. October 31, 2006.
- *Environmental Geodata [LOSSAN]*. Environmental Data Resources, Inc. (EDR). January 2003.

These reports evaluate the potential hazardous waste/material concerns within the project study area. These studies indicate that the following contaminants occur, or have the potential to occur within the highway project area:

- Aerially deposited lead
- Petroleum hydrocarbons
- Landfills
- Pesticides and herbicides
- Chemical spills
- Asbestos
- Lead
- Treated wood

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use. Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

5.8.2 TREP/PWP Concerns

5.8.2.1 Geology, Soils, Seismicity, and Topography

As the proposed TREP/PWP program would involve rail and highway improvements to existing facilities, safety and stability concerns associated with project implementation within the NCC would be similar to those that currently exist today. Environmental documentation and analysis prepared for the TREP/PWP rail and highway corridor improvements indicate that the study area would be subject to ground shaking and the possibility of liquefaction. Surface fault rupture, ground shaking, and seismically induced ground failure could result in substantial damage to structures. In addition, concerns include potential risk to public safety due to collapse or toppling of partially constructed or completed transportation facilities during strong earthquakes. Interruption of service due to failed infrastructure caused by ground rupture along active faults or ground motion during strong earthquakes could affect transportation facilities that are critical for emergency evacuation for the region, which is also subject to geologic, flood, tsunami, and fire hazards.

Earthquakes could also trigger landslides where slopes are prone to failure because of geologic conditions or because of modifications during construction. Slope instability could also occur naturally due to factors such as fracture patterns, soil saturation, steep slopes, or excessive erosion. TREP/PWP improvements that involve landform alteration, significant ground disturbance, and vegetation removal could create or contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. Slope instability could cause severe damage to surface and near-surface improvements as well as risks to public safety; however, slope instability can generally be mitigated with planning and design.

5.8.2.2 Drainage and Flood Areas

Portions of the TREP/PWP study area are subject to flooding and other drainage concerns. As the proposed TREP/PWP program would involve rail and highway corridor improvements to existing facilities, potential safety and stability impacts associated with project implementation within the NCC would be similar to those that exist today, except that new rail and highway corridor improvements that encroach on floodplains could potentially reduce the flood-carrying capacity and increase flood elevations. In addition, existing and proposed waterbody crossings, particularly culvert crossings, if not properly designed may be subject to overtopping during high-flood events and/or due to debris reducing water conveyance, and, over the years, may be undercut by stream flow, eventually causing scouring around the structure undermining the foundation, and, thus, facilitating structural collapse.

5.8.2.3 Shoreline Erosion/Sea Level Rise

Portions of the TREP/PWP study area are subject to shoreline erosion. Through Del Mar, as well as a limited portion of Encinitas, existing and proposed rail corridor improvements would occur along and adjacent to coastal bluffs and therefore would be subject to shoreline/coastal bluff erosion and retreat. Portions of the rail corridor in Del Mar are protected by shoreline protective devices that are in need of ongoing repair and maintenance. In Encinitas, the rail improvement options would be located east of Pacific Coast Highway, which would provide an ample setback and buffer area between the alignment options and the coastal bluffs thereby ensuring that the rail facility would not be subject to potential site stability issues associated with bluff failure or shoreline erosion. In addition, many of the rail and highway facility bridges cross waterbodies that could also be subject to shoreline erosion, particularly the corridor's lagoons and river systems where bridge abutments and/or piles may be located in areas subject to flooding, storm surge or wave action.

The character of the coastline is the result of various natural processes, one of which is rising sea levels due to global climate change, which is a growing concern among coastal communities. The rising sea level has the potential to expose the coastline to increased storm surge, wave uprush, and flooding, and could affect existing NCC improvements, particularly where the improvements would be near the shoreline or subject to tidal influences such as bluffs, beach areas, and lagoons. Rising water levels would have a direct impact on shoreline erosion, which, in turn, could undermine foundations and shoreline protection structures for rail facilities along the coastal bluffs of Del Mar and Encinitas and/or rail and highway bridge structures across lagoons.

Potential impacts associated with shoreline erosion, and the exacerbating effects of sea level rise on shoreline erosion, storm surge and flooding, can be mitigated by siting and designing the proposed rail and highway improvements in a manner that minimizes the frequency with which structures are subject to wave action, tidal inundation and flooding. Such siting and design options include minimizing development encroachment into drainage and flood areas as much as feasible, locating development as far landward as feasible from areas subject to shoreline erosion (particularly coastal bluffs and beaches), elevating bridge structures above drainage and flood areas, and, where avoiding development in areas subject to subject to shoreline erosion, tidal inundation and flooding is infeasible, designing improvements to withstand significant storm events and long-term erosion.

5.8.2.4 Hazardous Wastes

Environmental documentation and analysis prepared for the TREP/PWP highway and rail corridor improvements indicate that portions of the study area contain hazardous wastes.

Worker health and safety and public safety are key issues when dealing with hazardous materials that could affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

In addition, potential chemical spills and other hazards from truck, auto, and train accidents could occur along the NCC, posing a risk to adjacent land uses. Further, construction activities have the potential for hazardous materials' release, spill, or leakage from construction demolition of existing structures and/or from construction vehicles and equipment.

5.8.2.5 LOSSAN Rail Corridor Impact Assessment

Geology, Soils, Seismicity and Topography

The proximity of the rail corridor to active fault systems establishes the potential for the area to be affected by a major seismic event. In general, seismic activity in the study area could include strong ground motion, liquefaction, seismically induced settlement, and embankment spreading.

Active seismicity represents a key constraint on design and construction for proposed rail improvements, including existing and proposed station sites, proposed tunneling alternatives, and planning for potential train derailment during a peak event. Some of the alignment options would require special design, including additional structural ductility and redundancy to withstand severe ground shaking as well as the potential for liquefaction and/or other types of seismically induced ground failure.

Standard engineering practice requires that the stability of project soils be evaluated for an appropriate safety factor and soil conditions must meet minimum safety factors for both static and seismic cases. Available data indicates that soils susceptible to erosion are located in a number of areas along the rail corridor. Erosion potential is not expected to be a substantial construction or operation issue; however, without the appropriate engineering, on-site soils and/or seismic activity could adversely affect the structural project section, predispose slope faces to erosion, and/or compromise slope stability.

Potential slope stability problems are of particular concern along the coastal bluff areas in Del Mar. In addition, proposed improvements that would involve landform alteration, significant ground disturbance, and vegetation removal could potentially create or contribute to erosion, geologic instability, or destruction of the site or surrounding area.

Drainage and Flood Areas

Drainage and floodplain impacts for proposed rail improvements are expected to be low overall, as the majority of proposed improvements would be done within the established LOSSAN rail corridor and would be designed to accommodate floodplains. Many of the proposed rail improvements (e.g., San Dieguito Double Track and Bridge Replacement, Sorrento Valley Double Track) will elevate the track over existing drainage and flood areas to address drainage and flooding concerns. It is expected that crossings over the corridor's waterbodies would be spanned either by bridges or culverts or, in the case of Del Mar and University Town Center, by improvements involving deep tunnels that would avoid surface floodplains; however, the placement of structures along the shoreline and/or within the floodplain of a waterbody, if not designed to minimize fill and the alteration and channelization of shorelines and/or floodplains, could adversely affect the ability of the system to convey flood waters and/or could contribute to increased erosion.

Shoreline Erosion/Sea Level Rise

In Del Mar, the existing LOSSAN rail alignment is constructed across the top of the relatively flat mesa, generally at or near the elevation of the bluff top, 40 to 65 feet above sea level. This rail alignment and its associated rip-rap protection provide a buffer from wave action; thus, the coastal bluff is predominantly subject to subaerial (surface water and wind) erosional processes in this location. A number of remedial or stabilization measures exist along the railway in the Del Mar area, including older improvements along the coastal bluff face that are in need of ongoing repair and maintenance. Wooden and concrete seawalls along portions of the bluff are currently protecting portions of the base of the bluff against erosion due to typical wave impact; however, these walls are occasionally of insufficient height to block heavy storm surf and require periodic maintenance to remain effective.

Coastal bluff areas along the existing rail corridor in Del Mar have the potential for slope instability due to shoreline erosion and retreat. While proposed TREP/PWP improvements could have a beneficial impact to shoreline processes with an option to remove the existing rail corridor from the coastal bluff areas in Del Mar, discussed below, ongoing maintenance activities and the possibility of having to extend or expand the existing shoreline protection system in consideration of sea level rise to maintain the existing rail ROW could adversely affect the long-term stability of the shoreline and rail corridor due to additional landform alteration and/or erosional impacts caused by new or extended shoreline protection devices. Section 30235 of the Coastal Act provides, in part, that shoreline protection devices shall be permitted to protect existing structures or public beaches in danger from erosion, when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Consistent with previous Commission actions to approve installation and ongoing maintenance activities for the existing shoreline protection system at Del Mar Bluffs (CDP 06-01-081, CDP 06-96-156 and CC-048-04), future stabilization and maintenance activities for the shoreline protection system will be required to further demonstrate that the improvements are necessary to protect the existing rail facility from bluff erosion, and that the improvements are least environmentally damaging feasible alternative

In addition, many of the rail bridges cross waterbodies that could also be subject to shoreline erosion, particularly the corridor's lagoons and river systems. The placement of structures along the shoreline and/or within the floodplain of these waterbodies could cause excessive erosion and result in structural failure if not designed to minimize the alteration and channelization of shorelines and/or floodplains, and with full consideration of the potential for sea level rise to expose the corridor waterbodies to increased storm surge, wave uprush, and flooding. As discussed above, siting and design options to mitigate for these potential adverse impacts include minimizing development encroachment into drainage and flood areas as much as feasible, locating development as far landward as feasible from areas subject to shoreline erosion, elevating bridge structures above drainage and flood areas, and, where avoiding development in areas subject to subject to shoreline erosion, tidal inundation and flooding is infeasible, designing improvements to withstand significant storm events and long-term erosion.

Hazardous Wastes

The analysis contained within the *LOSSAN Final Program EIR/EIS* was limited to searches of standard databases listing known sites and did not incorporate information on other smaller sites that could contribute to risk on a local basis and would be studied at the project-specific level. One hazardous material/waste site, consisting of a solid-waste landfill, was identified near the rail corridor south of Highway 52 in the Rose Canyon area within the study area of the Highway 52 to Santa Fe Depot rail segment. The site is considered relatively minor in extent and could be effectively mitigated through typical design and construction practices.

Because neither site-specific investigations nor on-site fieldwork was performed, little information is available about the nature and severity of contamination at the sites identified, or the schedule or program for cleanup, if any, so the information in this section represents a "site-count" approximation and may not fully divulge potential risk levels. Finally, all of the rail improvement alignment options would be within or adjacent to existing ROWs, and these alignments have a land use history under which additional unknown contamination (e.g., spills or accidental releases) would be a possibility.

Proposed implementation of LOSSAN rail corridor improvements could result in the discovery of contaminated materials. In addition, there is the potential for hazardous materials release into the environment during construction activities. As such, site-specific investigation and project-specific mitigation for future rail development activities would be necessary to adequately address potential impacts associated with hazardous wastes within the rail corridor improvement areas.

5.8.2.6 I-5 Highway Corridor Impact Assessment

Geology, Soils, Seismicity and Topography

The proximity of the highway project area to active fault systems establishes the potential for the area to be affected by a major seismic event, although ground-surface rupture is unlikely as there are no known active fault traces that cross the corridor. In general, seismic activity in the study area could include strong ground motion, liquefaction, seismically induced settlement, and embankment spreading, which could result in lateral spreading, cracking, slumping, or settlement of existing and proposed embankments causing structural failure. Caltrans Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE) from young faults in and near California. The MCE is defined as the largest earthquake expected to occur on a fault over a particular period of time.

Caltrans' standards require that the stability of project soils be evaluated for an appropriate safety factor and that soil conditions meet minimum safety factors for both static and seismic cases. Available data indicates that soils susceptible to erosion are located in a number of areas along the NCC. Most erosion potential could be controlled and contained through proper design, pollutant prevention plans, and mitigation. Erosion potential is not expected to be a substantial construction or operation issue; however, appropriate project-specific engineering must consider on-site soils and/or seismic activity that could adversely affect the structural project section, predispose slope faces to erosion, and/or compromise slope stability.

Drainage and Flood Areas

Drainage and floodplain impacts for proposed highway improvements are expected to be low, as the majority of proposed improvements would be done within the established highway corridor and proposed highway bridge crossings would not result in incompatible floodplain development. The *I-5 NCC Project Draft EIR/EIS* includes the results of Location Hydraulic Studies performed for the following waterbodies potentially affected by proposed highway improvements. FEMA Floodway/Floodplain ratings, existing and proposed highway bridge or culvert infrastructure improvements, and associated floodplain impacts are identified in Table 5.8-1.

The *I-5 NCC Project Draft EIR/EIS* Location Hydraulic Studies conclude that 100-year flood events would continue to be contained within the existing floodplain boundaries at each crossing location in the corridor with the proposed highway improvements. Proposed bridge improvements would result in a slight increase in water surface elevation within the floodplain of the crossing locations (with the exception of proposed improvements at Carmel Valley Creek, and Batiquitos and Buena Vista

Lagoons); however, these increases are negligible (all less than 3 inches) and would not result in substantial impacts to on-site or off-site locations associated with drainage and flooding. Proposed improvements at Carmel Valley Creek, and Batiquitos and Buena Vista Lagoons would result in a decreased water surface elevation within the floodplain of the crossing locations, a beneficial impact.

TABLE 5.8-1: WATERBODIES AND FREEWAY CROSSINGS (I-5 HIGHWAY CORRIDOR)

Waterbody	City Location	FEMA Rating	Existing I-5 Crossing Type	Proposed I-5 Crossing Type	Water Surface Elevation Change
Soledad Canyon Creek	San Diego	FEMA Zone AE Floodway	None	New Bridge	0.04 foot Increase
Los Peñasquitos Creek	San Diego	FEMA Zone AE Floodway	Bridge	No Change	No Change
Carmel Valley Creek	San Diego	FEMA Zone AE Floodway	Culvert	Replace with Bridge	4.4 foot Decrease
San Dieguito River	Del Mar	FEMA Zone A Floodplain	Bridge	Widen Bridge	3 inch Increase
San Elijo Lagoon	Solana Beach/ Encinitas	FEMA Zone A Floodplain	Bridge	Replace/Possibly Lengthen Bridge	Unknown
Cottonwood Creek	Encinitas	No FEMA Floodplain	Culvert	No Change	No Change
Batiquitos Lagoon	Encinitas/ Carlsbad	FEMA Zone A Floodplain	Bridge	Replace Bridge	0.7 foot Decrease
Encinas Creek	Carlsbad	No FEMA Floodplain	Culvert	Extend Culvert	0.22 foot Increase
Agua Hedionda Lagoon	Carlsbad	FEMA Zone A Floodplain	Bridge	Replace Bridge	0.1 foot Increase
Buena Vista Lagoon	Carlsbad/ Oceanside	FEMA Zone A Floodplain	Bridge	Replace Bridge	0.4 foot Decrease
Loma Alta Creek	Oceanside	FEMA Zone AE Floodway	Bridge	Widen Bridge	0.04 foot Increase
San Luis Rey River	Oceanside	FEMA Zone A99 Floodplain	Bridge	Widen Bridge	0.03 foot Increase

Source: I-5 NCC Project Draft EIR/EIS (Section 3-9), June 2010.

Shoreline Erosion/Sea Level Rise

Highway facility bridges cross waterbodies that may also be subject to shoreline erosion, particularly the corridor's lagoons and river systems. As noted above, however, drainage and flooding impacts associated with the highway improvements would be negligible, which would in turn serve to minimize potential adverse impacts associated with alteration and channelization of shorelines and/or floodplains and associated erosion. In addition, Caltrans has reviewed the proposed highway bridge improvements across the corridor to determine if bridge designs could accommodate a projected 1.0 to 1.4 meters (3.3 to 4.6 feet) rise in sea level and determined, under a worst-case scenario, the NCC highway bridges would maintain 0.5 meter (1.6 feet) of freeboard in the year 2100 (the worst-case condition would occur at the Buena Vista Lagoon crossing, which currently provides approximately 1.9 meters (6.2 feet) of freeboard at the lagoon); therefore, the proposed I-5 bridge replacement projects are

designed to accommodate the anticipated increase in mean sea level rise through the year 2100, which would minimize the structures' exposure to increased storm surge, wave uprush, and flooding.

Hazardous Wastes

Implementation of proposed highway improvements could result in the discovery or release of contaminated materials, primarily during construction activities. Soil along and adjacent to the shoulders of I-5 is generally non-hazardous with respect to Aerial Deposited Lead (ADL); however, if excess soil from the shoulders that contain ADL is exported, further characterization would be necessary to evaluate proper disposal criteria. Hazardous waste with respect to petroleum hydrocarbons concerns include service stations located at intersections. Petroleum hydrocarbons could be encountered in soil and groundwater at intersections during trenching to move utilities and during bridge reconstruction/widening at abutments and bents, particularly at Via de la Valle, Birmingham Drive, Brooks Street, Palomar Airport Road, Carlsbad Village Drive, and Mission Avenue. Caltrans would comply with the National Pollutant Discharge Elimination System (NPDES) permit for handling and disposing of groundwater for intersections, and further characterization for petroleum hydrocarbons, volatile organic compounds, or semi-volatile organic compounds as to the proper disposal.

Two landfills were identified within the project footprint: Olympus Street Landfill at the intersection of Piraeus Street and Olympus Street in Leucadia; and Maxson Street Landfill at Maxson Street in Oceanside. Olympus Street Landfill is a burn ash site and is occupied mostly by residential housing. Soil sampling at Olympus Street Landfill contained non-hazardous concentrations of lead within Caltrans ROW and adjacent properties. Maxson Street Landfill included municipal solid wastes now covered by a park, baseball fields, residential housing, a golf course, and retail businesses. Investigations within the existing Caltrans' ROW along Maxson Street Landfill did not encounter wastes associated with the landfill.

Nurseries and farmland occur along both sides of I-5 from the Manchester Avenue interchange to the Palomar Airport Road interchange. The shallow soils on and around these nurseries contain pesticides and herbicides; however, testing of soil for pesticides and herbicides indicates that soil containing these pesticides are not considered a hazardous waste.

Chemical spills from truck and auto accidents have historically occurred along I-5. These spills mainly consist of petroleum hydrocarbons, but other chemicals may be present. In addition, there is the potential for hazardous materials release into the environment during construction activities.

Asbestos could be found in bridge joint and piping material. These materials could pose a health hazard if workers are exposed to them during construction activities. Lead-based paint could have been used on metal guardrails, piping, or in structures to be demolished. If yellow paint or yellow thermal plastic paint is to be removed during construction activities, these materials could pose a health hazard if workers are exposed to them during construction activities. The wood guardrail posts and signposts on site have been treated with creosote. If these posts were removed, a safety and health work practices plan must be submitted to the resident engineer prior to removal. The wood must then be handled and disposed in accordance with Caltrans' treated wood nonstandard special provision.

5.8.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

Proposed rail and highway improvements would be located in areas potentially subject to various hazards as discussed above; however, public safety would be improved throughout the corridor as proposed rail and highway improvements would be designed and implemented according to current design practices to better withstand potential seismic, flooding, and erosional events. The corridor is located in a seismically active area due to several nearby faults; however, proposed TREP/PWP improvements would serve to maintain or improve existing and future transportation facilities and operations in the corridor and provide facility compliance with current code requirements that ensure long-term, safe, and efficient operations. The proposed improvements would reduce risk to life and property in the NCC.

5.8.3.1 LOSSAN Rail Corridor Opportunities

In addition to implementing rail improvements to increase service and ridership and comply with current design and code requirements (which, in turn, would ensure long-term safety and stability for rail facilities and operations), proposed rail bridge improvements could be designed to reduce existing fill areas and to minimize stream alterations at bridge abutments and pilings, where feasible. The proposed bridge improvements could therefore result in increased and improved drainage across the facility and reduced erosion potential where bridge structures intersect with the waterbody.

Further, the proposed rail improvements would provide a unique opportunity to improve the coastal bluff area in Del Mar with an option to remove the existing rail service from the bluff area, thereby alleviating the need for ongoing maintenance of shoreline protection devices previously permitted to ensure stability of the bluffs and rail operations. Should the rail service be removed from the coastal bluffs in this area, there could be an additional opportunity to remove the existing shoreline protective system and restore the coastal bluff and thus reduce long-term shoreline erosion impacts associated with those shoreline structures.

5.8.3.2 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail 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. Because project-level analysis for proposed rail improvements will not occur until project alternatives are chosen; preliminary design, engineering, and resource impact analyses have been developed; and mitigation measures and monitoring plans prepared, the analysis contained herein for the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary impact assessment associated with site stability and management, and design and development strategies to address potential impacts. The following design and development strategies provide guidance in addressing potential site stability and management issues for specific rail development projects. As proposed rail improvement plans are further developed, additional design and development strategies to address site stability and management would be evaluated by the Lead Agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

1. Site-specific project design for rail improvements should be based on the results of detailed (design-level) engineering geologic and geotechnical studies.

2. The requirements of Section 19 (Earthwork) of the most current Standard Specifications should be applied to all proposed rail improvements to ensure that geotechnically stable slopes are planned and created. Seismic design for the structures should be based on Seismic Design Criteria.
3. The potential for railway structural damage and resulting traffic hazard as a result of liquefaction should be mitigated through site-specific methods such as ground modification methods (soil densification) to prevent liquefaction, or structural design (e.g., deep foundations) to accommodate/ resist the liquefiable zones.
4. Project implementation should include Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit requirements. A SWPPP should be developed and implemented during construction to reduce pollutants in storm water discharges and the potential for erosion and sedimentation. The SWPPP would include BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements, stormwater management, and channel dewatering for all stream and lake/lagoon crossings. These may include measures to provide permeable surfaces where feasible and to retain and treat stormwater on-site using catch basins and treatment (filtering) wetlands, especially in areas around existing stations if the areal extent of surface parking is expanded or at new stations where new parking surface is constructed. Measures to manage the overall amount and quality of stormwater runoff to regional systems would be detailed as part of the SWPPP.
5. As part of the future project-level analysis for proposed rail improvements, floodplain hydrology/hydraulics should be analyzed to evaluate the impacts of specific designs on water surface elevations and flood conveyance and to evaluate potential flooding risk. Where feasible, construction of facilities within floodplains should be avoided. Where infeasible, the footprint of facilities within the floodplain should be minimized. Where feasible, floodplains impacted by construction should be restored so they can again operate as before. Where there is no practicable alternative to avoid construction in the floodplain, the footprint of facilities within the floodplain should be minimized to the extent feasible (e.g., by use of aerial structures or tunnels).
6. As part of the future project-level analysis for proposed rail improvements, all opportunities to minimize flooding risk and potential harm to or within the floodplain should be assessed.
7. Analysis of how proposed rail improvements would contribute to total additional impervious surface and the subsequent potential additional impacts on surface runoff should be conducted. This analysis should also identify potential mitigation measures to minimize runoff, including on-site bioswales and retention facilities.
8. The potential impact of sea level rise associated with global climate change should be considered in the design and/ or refurbishment of all rail infrastructure. As part of the future project-level analysis for proposed rail improvements that may be subject to shoreline erosion, tidal inundation and flooding, an analysis of rail improvement location and design in relation to projected future changes in sea level rise should be prepared to ensure new development is located and designed to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected design life of the structure (75 years).
9. Shoreline armoring should only be allowed to protect existing, legal structures, or where necessary for replacement structures across waterbodies, that are proven to be in danger from erosion, and only if: (a) less-environmentally damaging alternatives to armoring are not feasible (including relocation of endangered structures); and (b) the armoring has been sited, designed, and accompanied by feasible measures to proportionately mitigate any unavoidable negative coastal resource impacts (on views, sand supply, public access, etc.).

10. Project affected areas within 100 feet of the blufftop edge should be protected and enhanced through removal of non-natives and invasives and revegetation with native bluff species, where feasible.
11. All soils proposed for disturbance for rail improvements should be investigated for contamination and Phase I Environmental Site Assessments (ESAs) should be prepared when necessary. When indicated by project level Phase I ESAs, a Phase II ESA (e.g., hydrogeologic investigation) should be prepared to identify specific mitigation measures. The Phase II ESAs should be prepared in conformance with the ASTM Standards Related to the Phase II Environmental Site Assessment Process (E1903-01). Phase II ESA mitigations should be implemented as appropriate.
12. A Site Management Program/Contingency Plan (SMP/CP) should be prepared prior to construction/demolition of rail improvements to address known and potential hazardous material issues. All rail improvement projects should prepare and implement construction staging plans with designated areas to accommodate equipment and vehicles fueling a minimum of 50 feet away from waterbodies over paved or impervious surfaces, and any fuel or petroleum products used for project equipment and vehicles should be stored a minimum of 50 feet from waterbodies and within the staging area paved or impervious surfaces. Equipment and vehicles should be inspected daily for fuel or fluid leaks, and leaking equipment or vehicles should be repaired or replaced immediately. The Contractor should 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.
13. SANDAG and Caltrans acknowledge and agree: (i) that the site of the proposed project may be subject to hazards from seismic events, tsunamis, liquefaction, storms, floods, erosion, and toxic contaminants; (ii) to assume the risks to employees and assigns of Caltrans/SANDAG, including contractors and subcontractors and their officers, agents, and employees, and to the public utilizing the proposed project during and after construction, and to the property that is the subject of this permit of injury and/or damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense against such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

5.8.3.3 I-5 Highway Corridor Opportunities

Proposed TREP/PWP improvements would involve highway facility upgrade and replacement projects that would provide compliance with current design and code requirements, which would ensure long term safety and stability for highway facilities and operations. Further, I-5 has been identified as a Strategic Highway Network link, providing defense access, continuity, and emergency capabilities for movement of personnel and equipment in both peace and war times. Overall safety for users of the corridor (and for purposes of emergency evacuation and increased accessibility for emergency vehicles) would be improved with reduced congestion on the transportation facilities.

In addition, proposed improvements for existing highway bridge facilities have been designed, in some locations, to reduce existing fill areas and would therefore minimize stream alterations at bridge abutments and pilings, where feasible. These proposed bridge improvements would result in increased and improved drainage across the facility and reduced erosion where bridge structures intersect with the waterbody. In particular, the proposed highway improvements would result in a beneficial impact to

drainage and flooding where an existing culvert at Sorrento Valley Road would be removed, thus eliminating an existing constriction in Carmel Valley Creek. Overall project benefits to floodplains and system hydrology (decreases in flood water surface elevation) are also anticipated for Batiquitos, Buena Vista, and San Elijo Lagoons.

5.8.3.4 I-5 Highway Corridor Policies and Implementation Measures

In addition to the opportunities of the proposed highway projects to improve stability and safety of the highway facility and operations, and to improve drainage and reduce the potential for erosion, siting and design parameters for proposed highway and community enhancement projects would be implemented by Caltrans, as applicable, pursuant to the following policy and implementations measures to further ensure that improvements are designed, implemented and maintained to provide for maximum site stability minimizing of hazards. Notice of Impending Development (NOID) submittals for highway and community enhancement project implementation should demonstrate compliance with the following policy and implementation measures.

Policy 5.8.1: All highway and community enhancement improvements should 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 should be based on the results of detailed (design-level) engineering geologic and geotechnical studies. Development of highway and community enhancement should be subject to the following development standards.

Implementation Measure 5.8.1: The appropriate technical personnel should be present during project construction of all highway improvements to observe cuts, foundation subgrade, and embankment subgrade to assure that all design-level provisions are enforced consistent with Caltrans Standard Plans and Specifications. If unanticipated subsurface conditions are encountered, a geotechnical representative should be notified to make additional recommendations to the Resident Engineer, who in turn, would direct the contractor to comply with Caltrans Standard Plans and Specifications. Instrumentation for measuring settlement or slope distress, and periodic surveying for ground movement should included during construction in areas where the potential for ground movement or failure exists.

Implementation Measure 5.8.2: For all highway improvements, grading and roadway work should be performed in accordance with Caltrans Standard Plans and Specifications. Drainage for proposed improvements should be constructed in accordance with the Caltrans Highway Design Manual. Where groundwater is present, subsurface drainage devices should be installed where necessary.

Implementation Measure 5.8.3: The potential impact of sea level rise associated with global climate change should be considered in the design and/ or refurbishment of all highway infrastructure. NOID submittals for proposed highway and community enhancement improvements that may be subject to shoreline erosion, tidal inundation and flooding, should include an analysis of improvement location and design in relation to projected future changes in sea level rise to ensure new development is located and designed to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected design life of the structure (75 years).

Implementation Measure 5.8.4: Shoreline armoring should only be allowed to protect existing, legal structures, or where necessary to protect replacement structures across waterbodies, that are proven to be in danger from erosion, and where proposed to improve fish and wildlife habitat only if: (a) less-environmentally damaging alternatives to armoring are not feasible (including relocation of endangered

structures); (b) the armoring has been sited, designed, and accompanied by feasible measures to proportionately mitigate any unavoidable negative coastal resource impacts (on views, sand supply, public access, etc.). The limitations of this measure should not apply to minor runoff control/dissipater features where located and designed to convey and discharge runoff to waterways in a nonerosive manner.

Implementation Measure 5.8.5: Project affected areas within 100 feet of the blufftop edge should be protected and enhanced through removal of non-natives and invasives and revegetation with native bluff species, where feasible.

Implementation Measure 5.8.6: Caltrans Environmental Engineering should be kept informed of parcel takes and changes in scope or design as further hazardous waste investigation may be necessary on individual parcels if acquired/ utilized. Since there are known chemical constituents present in soil and groundwater within the I-5 corridor, soil excavation activities should be performed under the guidelines of a site-specific Soil Management Plan and Health and Safety Plan.

Implementation Measure 5.8.7: The Department of Toxic Substances Control (DTSC) lead variance should be followed for ADL soil excavated in the highway improvement area. Soil excavated as a whole along the shoulders may be reused as clean material with regard to ADL, unless soil adjacent to the shoulder is segregated from the whole. The DTSC lead variance should apply for segregated soil from the shoulder. Otherwise, the disposal of ADL soil to a Class I landfill should be required. Handling or disposal of contaminated groundwater should comply with NPDES permit requirements.

Implementation Measure 5.8.8: Soils located in the immediate vicinity of service stations in the highway corridor should be tested for petroleum hydrocarbons, volatile organic compounds, or semi-volatile organic compounds in order to evaluate the proper handling and/or disposal methods should such contaminants be discovered. Soil excavation activities should be performed under the guidelines of a site-specific Soil Management Plan and Health and Safety Plan and handling or disposal of contaminated groundwater should comply with NPDES permit requirements.

Implementation Measure 5.8.9: Highway widening activities in the vicinity of the landfills should be avoided to the extent feasible. If parcels are acquired at landfill locations and/or if landfill deposits are encountered, soil excavation activities should be performed under the guidelines of a site-specific Soil Management Plan and Health and Safety Plan and excavated soil should be subject to further characterization to evaluate potential risk and proper disposal method consistent with Caltrans Standard Plans and Specifications.

Implementation Measure 5.8.10: If soil from locations containing farmland and nurseries is exported, further characterization for pesticide/herbicides should be conducted to evaluate potential risks and proper disposal method.

Implementation Measure 5.8.11: Hazardous Materials Contingency Plans to address chemical spills along the highway alignment should be written into the construction contract to deal with hazardous waste issues consistent with Caltrans Standard Plans and Specifications.

Implementation Measure 5.8.12: Where wood guardrail posts, signposts, and/or railroad ties are to be removed/demolished during construction a safety and health work practices plan should be submitted to the resident engineer prior to removal. As necessary, wood should be handled and disposed in accordance with the Caltrans' treated wood nonstandard special provision, including disposal at a composite-lined solid waste landfill facility permitted to accept such wastes.

Implementation Measure 5.8.13: Prior to demolition of any buildings or existing structures such as bridges for project construction, a survey for lead-based paint and asbestos-containing materials should be prepared. Should lead-based paint and asbestos-containing materials be discovered, a safety and health work practices plan should be submitted to the resident engineer prior to removal. All lead-based paint and asbestos-containing materials should be handled and disposed in accordance with applicable Caltrans policies.

Implementation Measure 5.8.14: All highway and community enhancement improvement projects should prepare and implement construction staging plans with designated areas to accommodate equipment and vehicles fueling a minimum of 50 feet away from waterbodies over paved or impervious surfaces, and any fuel or petroleum products used for project equipment and vehicles should be stored a minimum of 50 feet from waterbodies and within the staging area paved or impervious surfaces. Equipment and vehicles should be inspected daily for fuel or fluid leaks, and leaking equipment or vehicles should be repaired or replaced immediately. The Contractor should 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.

Implementation Measure 5.8.15: SANDAG and Caltrans acknowledge and agree: (i) that the site of the proposed project may be subject to hazards from seismic events, tsunamis, liquefaction, storms, floods, erosion, and toxic contaminants; (ii) to assume the risks to employees and assigns of Caltrans, including contractors and subcontractors and their officers, agents, and employees, and to the public utilizing the proposed project during and after construction, and to the property that is the subject of this permit of injury and/or damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense against such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

5.8.4 Coastal Act Consistency

Coastal Act Section 30253 addresses the need to ensure long-term stability and structural integrity, minimize risk, and avoid landform-altering devices. Section 30253 provides, in applicable part:

> Section 30253. New development shall:
>
> (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
>
> (2) 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.
>
> Section 30235. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Coastal Act Section 30253 requires that new development be sited and designed to minimize risks to life and property and assure long-term stability and structural integrity of the project site and surrounding areas, and that new development be sited and designed so as not to require construction of shoreline protective devices that have the potential to alter natural shoreline processes. Coastal Act Section 30235 permits construction of shoreline protective devices only where necessary to serve coastal-dependent uses, or where required to protect existing structures or public beaches in danger from erosion.

Coastal Act Section 30232 addresses hazardous spills. Section 30232 states:

> Section 30232. Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Coastal Act Section 30232 requires that hazardous spill risks be minimized and that appropriate containment and cleanup facilities and procedures be in place should spills accidentally occur.

5.8.4.1 LOSSAN Rail Corridor Consistency Analysis

Geology, Soils, Seismicity, and Topography

Proposed rail improvements would be designed and developed to avoid and minimize potential impacts associated with geologic hazards, unstable soils, seismicity, and topography. To avoid these risks, site-specific project design could be based on the results of detailed (design-level) engineering geologic and geotechnical studies and could include measures such as ground modification methods (soil densification) to prevent liquefaction, or structural design (e.g., deep foundations) to accommodate/ resist the liquefiable zones. Site and soil stability would further be addressed through developing and implementing Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit requirements. As the program improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would avoid construction of undisturbed, and potentially unstable steep topography. Other potential impacts associated with topography, excessive erosion and construction activities would be addressed with construction phase Best Management Practices (BMP) requirements, which would minimize uncontrolled site runoff and erosion to ensure site stability.

It is unlikely that train derailment during a potential peak event could be mitigated by designing a track-wheel system capable of withstanding the ground motions in most of the project area. Existing train systems throughout California, including the existing service along the LOSSAN rail corridor, face the same challenge; however, a network of strong-motion instruments has been installed throughout California and additional monitoring stations are proposed. These stations provide ground-motion data that could be used with the rail instrumentation and controls system to temporarily shut down the LOSSAN rail operations during or after an earthquake. The system would then be inspected for damage due to ground motion and/or ground deformation and then returned to service when appropriate. This type of seismic protection is already used for many transit systems in seismically active areas and has been proven effective.

Drainage and Flooding

Potential impacts associated with drainage and flooding would be addressed, in large part, through design of rail facilities. As noted previously, many of the proposed rail improvements (e.g., San Dieguito Double Track and Bridge Replacement, Sorrento Valley Double Track) will elevate the track

over existing drainage and flood areas to address drainage and flooding concerns. It is expected that crossings over the corridor's waterbodies would be spanned either by bridges or culverts or, in the case of Del Mar and University Town Center, by improvements involving deep tunnels that would avoid surface floodplains. Design and development strategies for rail improvements provide that future project-level analysis for proposed rail improvements would assess floodplain hydrology/hydraulics and evaluate the impacts of specific designs on water surface elevations, flood conveyance, and potential flooding risk. Where feasible, construction of facilities within floodplains would be avoided, or the footprint of facilities within the floodplain would be minimized.

Shoreline Erosion/Sea Level Rise

The TREP/PWP includes rail improvement options in Encinitas that would be set back east of Pacific Coast Highway, thereby providing an ample buffer between the rail alignment and the coastal bluffs. The proposed rail improvements provide a unique opportunity to improve the coastal bluff area in Del Mar with an option to remove the existing rail service from the bluff area, thereby alleviating the need for ongoing maintenance of shoreline protection devices previously permitted to ensure stability of the bluffs and rail operations. Should the rail service be removed from the coastal bluffs in this area, there could be an additional opportunity to remove the existing shoreline protective system and restore the coastal bluff and thus reduce long-term shoreline erosion impacts associated with those shoreline structures; however, it is also recognized that there is a need for the existing, permitted shoreline protection system at the Del Mar bluffs to protect the existing rail facility, and that this system could require maintenance to maintain site stability and rail operations in this area. It is also recognized that some shoreline alteration at bridge abutments and piles could be required where rail facility bridges cross waterbodies throughout the corridor. To ensure this development continues to be maintained and developed consistent with the Coastal Act, design and development strategies specify that shoreline armoring should only be allowed to protect existing, legal structures, or where necessary for replacement structures across waterbodies, that are proven to be in danger from erosion, and only if (a) less-environmentally damaging alternatives to armoring are not feasible (including relocation of endangered structures); and (b) the armoring has been sited, designed, and accompanied by feasible measures to proportionately mitigate any unavoidable negative coastal resource impacts (on views, sand supply, public access, etc.).

Design and development strategies further provide that potential impacts of sea level rise associated with global climate change should be considered in the design and/ or refurbishment of all rail and infrastructure. The strategies provide that proposed rail improvements that may be subject to shoreline erosion, tidal inundation and flooding should include an analysis of improvement location and design in relation to projected future changes in sea level rise to ensure new development is located and designed to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected design life of the structures (75 years). These strategies would ensure that the proposed improvements are located and designed to address potential hazards associated with the anticipated increase in mean sea level rise, based on the most current sea level rise projections and data available at the time of project implementation.

Hazardous Wastes

Proposed rail improvements would be designed and developed to avoid and minimize potential impacts associated hazardous material release into the environment. To avoid and minimize hazardous materials risks, design and development strategies provide that soils proposed for disturbance for rail improvements would be investigated for contamination and Phase I and/ Phase II ESAs prepared, when necessary. Design and development strategies provide for implementation of Site Management

Program/Contingency Plans (SMP/CP), when applicable, to address known and potential hazardous material issues, which could include contaminated soil and groundwater, lead-based paint, and asbestos-containing materials. Design and development strategies also provide for development and implementation of project-specific spill contingency plans, and preparation and implementation of construction staging plans with designated areas to accommodate equipment and vehicles fueling a minimum of 50 feet away from waterbodies 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.

5.8.4.2 I-5 Highway Corridor Consistency Analysis

Geology, Soils, Seismicity, and Topography

Proposed highway improvements would be designed and developed to avoid and minimize potential impacts associated with geologic hazards, unstable soils, seismicity, and topography. Environmental documentation and technical studies for the highway improvements have found that the facilities would be designed and developed to avoid and minimize potential impacts associated with geologic hazards, unstable soils, seismicity, and topography. To avoid the risks associated with seismic hazards, the TREP/PWP includes implementation measures that would require appropriate technical personnel to be present during project construction of all highway improvements to observe cuts, foundation subgrade, and embankment subgrade to assure that all design-level provisions are enforced. If unanticipated subsurface conditions are encountered, the TREP/PWP requires that a geotechnical representative would be notified to make additional recommendations to the Resident Engineer, who in turn, would direct the contractor.

Site and soil stability would be addressed further through developing and implementing Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit requirements. As the program improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would avoid construction of undisturbed, and potentially unstable steep topography. Other potential impacts associated with topography, excessive erosion, and construction activities would be addressed with construction-phase BMP requirements, which would serve to minimize uncontrolled site runoff and erosion and ensure site stability, discussed in more detail in Section 5.4, Marine Resources: Water Quality and Wetlands.

Drainage and Flooding

Potential impacts associated with drainage and flooding have been addressed, in large part, through design of highway bridge facilities. Environmental documentation and technical studies for proposed highway improvements concluded that highway improvements would have a negligible effect on drainage and floodplains in the corridor and would result in improved drainage and flood conveyance at Carmel Valley Creek, Batiquitos, Buena Vista, and San Elijo Lagoons.

Proposed highway improvements would not include construction of new pipes, box culverts, or underground channels that would adversely affect natural stream courses or cause drainage or floodplain impacts. Highway bridge improvements that would occupy areas within floodways in the corridor would be necessary to upgrade and protect existing or replacement crossing structures for continued public safety. Improvements would not create an unreasonable, unnecessary, undesirable, or dangerous impediment to the flow of floodwaters, and would be designed to minimize necessary stream alternations. Other than placing necessary bridge support structures (abutments and/or pilings) and extending existing culverts, proposed highway improvements would not involve the construction of new structures that would alter significant drainage patterns.

Shoreline Erosion/Sea Level Rise

Drainage and flooding impacts associated with the highway improvements would be negligible, which would in turn minimize potential adverse impacts associated with alteration and channelization of shorelines and/or floodplains and associated erosion. Other than necessary protection structures placed at the base of bridge support structures (abutments and/or pilings), proposed highway improvements would not involve the construction of new or expanded shoreline protective devices that would alter natural landforms or shorelines and result in associated shoreline erosion. In cases where bridge structures would potentially be replaced and lengthened (San Elijo Lagoon) and where culvert removal is proposed at Carmel Valley Creek, removal of existing bridge abutment and culvert structures would result in restoring a more natural shoreline at the facility crossing.

To ensure that necessary protection structures for bridge supports (abutments and/or pilings) are developed consistent with the Coastal Act, TREP/PWP implementation measures require that shoreline armoring be allowed only to protect existing legal structures, or where necessary for replacement structures across waterbodies that are proven to be in danger from erosion, and only if (a) less-environmentally damaging alternatives to armoring are not feasible (including relocation of endangered structures); and (b) the armoring has been sited, designed, and accompanied by feasible measures to mitigate any unavoidable negative coastal resource impacts (on views, sand supply, public access, etc.). The TREP/PWP further provides that policy limitations on shoreline structures should not apply to minor runoff control/dissipater features where located and designed to convey and discharge runoff to waterways in a nonerosive manner.

The NCC TREP/PWP further specifies that the potential impact of sea level rise associated with global climate change be considered in the design and/or refurbishment of all highway infrastructure. Caltrans has reviewed the proposed highway bridge improvements across the corridor to determine if bridge designs could accommodate a projected 1.0 to 1.4 meter (3.3 to 4.6 feet) rise in sea level and determined, under a worst-case scenario, the NCC highway bridges would maintain 0.5 meters (1.6 feet) of freeboard in the year 2100 (the worst-case condition would occur at the Buena Vista Lagoon crossing, which currently provides approximately 1.9 meters (6.2 feet) of freeboard at the lagoon). As such, the proposed I-5 bridge replacement projects are designed to accommodate the anticipated increase in mean sea level rise through the year 2100, which would minimize the structures' exposure to increased storm surge, wave uprush, and flooding. In addition, TREP/PWP implementation measures specify that NOID submittals for proposed highway and community enhancement improvements that may be subject to shoreline erosion, tidal inundation and flooding should include an analysis of improvement location and design in relation to projected future changes in sea level rise to ensure new development is located and designed to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected design life of the structures (75 years). These measures would ensure that the proposed improvements are located and designed to address potential hazards associated with the anticipated increase in mean sea level rise, based on the most current sea level rise projections and data available at the time of project implementation.

Hazardous Wastes

The NCC TREP/PWP includes numerous implementation measures to ensure that potential on-site hazardous materials along the proposed highway improvement areas be properly identified and that plans be developed for the handling and disposal of such materials in a safe and legal manner. In addition, the TREP/PWP requires that construction refueling/staging occur in pre-designated areas away from waterbodies, that equipment be inspected and maintained at regular intervals, and that

appropriate containment and cleanup facilities and procedures be in place should spills accidentally occur.

5.8.4.3 Coastal Act Consistency Analysis Summary

Based on available project and environmental data, and the design/development strategies and policies and implementation measures included herein, the proposed TREP/PWP improvements would minimize risks to life and property in areas of high geologic hazards, assure project stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, consistent with Section 30253 of the Coastal Act. TREP/PWP improvements would not result in construction of new shoreline protection structures that would substantially alter natural shoreline processes. Shoreline protection structures associated with the proposed improvements would be minor and would consist only of protection measures necessary to support existing and/or replacement facility crossings, where designed, to eliminate or minimize impacts to shoreline processes. As such, proposed TREP/PWP improvements are consistent with Section 30235 of the Coastal Act. Finally, the TREP/PWP would provide for protection against spillage of crude oil, gas, petroleum products, or hazardous substances and would require that effective containment and cleanup facilities and procedures be in place for accidental spills that could occur. The TREP/PWP is therefore also consistent with Section 30232 of the Coastal Act.

Assumption of Risk

The TREP/PWP notice of impending development (NOID) process and phased Federal Consistency review process, when applicable, will include appropriate, detailed environmental information and technical studies required to address issues associated with potential hazards in the corridor prior to project implementation to ensure consistency with Sections 30253, 30235 and 30232 of the Coastal Act; however, the proposed project would be subject to potential geologic and hazardous materials risks. Further, the location of the proposed project would render it subject to the additional natural hazards posed by storms and floods, as would be true of any project constructed in this portion of the coast.

Although TREP/PWP design and development strategies, policies and implementation measures would be applied to specific NCC projects, which are anticipated to withstand the predictable hazards associated with development in the corridor, it is not possible to remove all risk associated with the uncertainties of natural hazards. Residual risks remain. For these reasons, even though Caltrans/SANDAG has and/or would minimize predictable risks by engineering the proposed project to avoid, mitigate, and/or withstand the impacts described above, a degree of risk from natural hazards would remain and could not be fully mitigated. To protect the Coastal Commission and its employees from liability for the hazards posed by the subject structures and project features designed and managed by Caltrans/SANDAG, the TREP/PWP provides that SANDAG/Caltrans acknowledge and accept these risks.

5.8.5 Local Coastal Program Consistency

Appendix A includes Local Coastal Program (LCP) Policy Consistency Analysis matrices, which evaluate TREP/PWP consistency with the policies of each LCP area that would be affected by the proposed highway corridor improvements, and by those rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and thus fall under the exclusive jurisdiction of Surface Transportation Board (STB), the LCP policy consistency analysis may provide

guidance or background information for analyzing rail project consistency with Sections 30253, 30235 and 30232 of the Coastal Act, as appropriate and applicable (see Chapter 1 for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB). The corridor's LCP natural hazards, shoreline protection, and hazardous materials policies are summarized with brief city-specific consistency analyses below, which also integrate and supplement the above consistency analysis for Sections 30253, 30235 and 30232 of the Coastal Act. A complete list of LCP policies and corresponding consistency analysis is included in the LCP Policy Consistency Analysis matrix for each city (Appendix A).

5.8.5.1 Local Coastal Program Consistency Analysis Summary

Most of the corridor LCPs include policies that mirror, in part, the requirements of Sections 30253, 30235 and 30232 of the Coastal Act; however, the LCPs for Del Mar, Encinitas, Carlsbad and Oceanside also include a variety of additional, detailed and city-specific policies and development standards that address potential impacts associated with natural hazards, shoreline development and protection and erosion and, to a lesser extent, hazardous materials. Common policy requirements within the NCC LCPs include:

- Requiring site-specific geologic and/or geotechnical studies to identify potential site hazards and appropriate mitigation measures.
- Limiting construction in floodplains and shoreline protection devices pursuant to Sections 30235 and 30236 of the Coastal Act.
- Imposing bluff setback requirements.
- Avoiding grading and development on steep slopes, where feasible, and limiting the duration and timing of grading activities.
- Implementing drainage and stormwater runoff control plans to minimize site erosion.
- Minimizing grading and removal of vegetation.
- Revegetating graded and disturbed areas with native, drought-tolerant plant species to minimize erosions.
- Implementing drainage and stormwater runoff control plans to minimize site erosion.

It should be noted that many of the City's LCP policies that address natural hazards through grading, drainage, and stormwater runoff controls are also relied upon to address marine resources and water quality concerns. As such, LCP policies that focus on grading, drainage, and stormwater runoff measures are also addressed in more detail in Section 5.4, Marine Resources.

City of San Diego

The City of San Diego LCP and the corridor's five individual Community Plans contain a comprehensive set of policies to address potential hazards very similar to those listed above as common policies within the NCC LCPs. While San Diego's LCP may vary to some degree in the details of its policy requirements, the most significant deviation in policies that address potential hazards from the other corridor LCPs relates primarily to restrictions on development encroachment onto steep slopes (25% or more grade); however, the Community Plans provide exemptions from this rule for major roads.

City of Del Mar

The City of Del Mar LCP includes policies that speak to requiring and implementing geotechnical and civil engineering studies and site-specific drainage, planting and irrigation systems to ensure site stability, in addition a number of policies that specifically address the city's fragile coastal bluffs and lagoon floodplains. The following policies provide guidance in analyzing potential visual resource issues associated with proposed rail improvements:

- Review all proposed drainage and irrigation systems for their ability to control runoff and seepage into downstream areas and to ensure that no significant erosion or the associated siltation of downstream resources will occur.
  - For purposes of this Land Use Plan, "significant erosion" shall mean the likelihood of removal of soil or the cutting, scarring, or rilling of slopes, canyons, or bluff faces, or the silting of lower slopes brought about by runoff from surfaces during irrigation or from rainfall of an intensity and duration less than or equal to that of the 100-year period design storm.
- A minimum setback of 40 feet from the edge of the coastal bluff top shall be provided in the construction of all principal structures and all accessory structures, such as, but not limited to: pools, spas, storage sheds, gazebos and above grade decks or patios...No grading or construction activities shall be allowed on the face of a coastal bluff unless approved as part of a Shoreline Protective Permit or Setback Seawall Permit issued in accordance with the provisions of this Land Use Plan and when such activity on the bluff face has been minimized to the maximum extent feasible necessary to provide the authorized shoreline protection.
- Native and other drought-tolerant plant species shall be utilized in all new blufftop construction projects so as to minimize irrigation requirements and to reduce potential slide hazards due to over watering of the bluffs. The construction of irrigation systems shall be prohibited within 40 feet of the edge of the coastal bluff top. In review of new construction projects, the removal of existing irrigation systems within the 40-foot setback shall be required as a condition of development.
- Areas to be retained in their natural state pursuant to the Coastal Bluff regulations shall be subject to conditions to ensure the future protection of the designated area(s) from encroachment, disturbance or degradation. Said conditions shall include the recordation of an open space deed restriction or open space easement to assure protection of the designated area and to serve notice to the property owner, subsequent owners or interested parties of the restrictions in effect on such property.
- Enhance public safety within the San Dieguito River Floodway by:
  - Prohibiting the construction of permanent structures or the placement of fill on either a temporary or permanent basis within designated floodway (FW) areas.
  - Prohibiting uses in the floodway that would constitute an unreasonable, unnecessary, undesirable, or dangerous impediment to the flow of floodwaters, or that would cause a cumulative increase in the water surface elevation of the base flood or more than 1 foot at any point.
  - Requiring proposed development to be located so as to eliminate the need for protective devices such as seawalls, riprap, retaining walls, or other flood control devices.
- Ensure that the development of real property that is subject to floodwaters will not obstruct flood flow; will not create a hazard to life, health, safety, or the general welfare; will reduce the need for the construction of flood control facilities that would be required if unregulated development occurs; and will minimize the cost of flood insurance to Del Mar residents.

City of Encinitas

The City of Encinitas LCP includes policies that address flooding, drainage, site stability, shoreline/bluff development and hazardous materials impacts similar to Coastal Act policy requirements, and in some cases provides specific development standards within designated overlays to achieve the LCP's policy goals:

- Development and grading or filling in drainage courses, floodways and floodplains shall be prohibited except as provided by Land Use Element Policy 8.2. Exceptions may also be made for development of circulation element roads; necessary water supply projects; flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development; developments where the primary function is the improvement of fish and wildlife habitat; and other vital public facilities, but only to the extent that no other feasible alternatives exist, and minimum disruption to the natural floodplain, floodway or drainage course is made. When flood/drainage improvements are warranted, require developers to mitigate flood hazards in those areas identified as being subject to periodic flooding prior to actual development.
- Restrict development in those areas where slope exceeds 25% as specified in the Hillside/Inland Bluff overlay zone regulations of the zoning code. Encroachment into slopes as detailed in the Hillside/Inland Bluff overlay may range from 0 percent to a maximum of 20 percent… upon the discretionary judgment that there is no feasible alternative siting or design that eliminates or substantially reduces the need for such encroachment, and it is found that the bulk and scale of the proposed structure has been minimized to the greatest extent feasible and such encroachment is necessary for minimum site development and that the maximum contiguous area of sensitive slopes shall be preserved. Within the Coastal Zone and for the purposes of this section, "encroachment" shall constitute any activity that involves grading, construction, placement of structures or materials, paving, removal of native vegetation including clear-cutting for brush management purposes, or other operations that would render the area incapable of supporting native vegetation or being used as wildlife habitat. Exceptions may also be made for development of circulation element roads, local public streets, or private roads and driveways, which are necessary for access to the more developable portions of a site on slopes of less than 25% grade, and other vital public facilities, but only to the extent that no other feasible alternatives exist, and minimum disruption to the natural slope is made.
- The City shall provide for the reduction of unnatural causes of bluff erosion, as detailed in the Zoning Code, by:
  - Requiring new structures and improvements to existing structures to be set back 25 feet from the inland blufftop edge, and 40 feet from coastal blufftop edge with exceptions to allow a minimum coastal blufftop setback of no less than 25 feet. For all development proposed on coastal blufftops, a site-specific geotechnical report shall be required. The report shall indicate that the coastal blufftop setback will not result in risk of foundation damage resulting from bluff erosion or retreat to the principal structure within its design life and with other engineering evidence to justify the coastal blufftop setback.
- Standards for the justification of preemptive erosion control devices and limits on location of shoreline devices shall be as detailed in the Zoning Code.
- Land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials will be located a safe distance from land uses that may be adversely impacted by such activities.

City of Carlsbad

The City of Carlsbad LCP incorporates Section 30253 of the Coastal Act into the LCP and recommends several actions to address potential natural hazard, flooding and drainage, and shoreline development issues within the city. In particular, the Carlsbad LCP focuses on grading restrictions and drainage requirements as a means of minimizing erosion and ensuring site stability:

- City's Grading Ordinance, Storm Water Ordinances, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the following additional requirements. The SUSMP, dated April 2003 and as amended, the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP.
- Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. As a condition of coastal development permit approval, permitted shoreline structures may be required to replenish the beach with imported sand. Provisions for the maintenance of any permitted seawalls shall be included as a condition of project approval.
- Any development proposal that affects steep slopes (25% inclination or greater) shall be required to prepare a slope map and analysis for the affected slopes. Steep slopes are identified on the PRC Toup maps. The slope mapping and analysis shall be prepared during the CEQA environmental review on a project-by-project basis and shall be required as a condition of a coastal development permit.
- Slopes of 25% grade and over shall be preserved in their natural state, unless the application of this policy would preclude any reasonable use of the property, in which case an encroachment not to exceed 10% of the steep slope area over 25% grade may be permitted. This policy shall not apply to the construction of roads on the City's Circulation Element or the development of utility systems.
- Development shall continue to be restricted in 100-year floodplain areas. Continuing the policy of zoning 100-year floodplains as open space will permit natural drainage to occur without the need for flood control channels. No permanent structures or filling shall be permitted in the floodplain and only uses compatible with periodic flooding shall be allowed.

City of Oceanside

The City of Oceanside LCP includes policies that mirror the requirements of Sections 30253 and 30235 of the Coastal Act, and additional policies with an emphasis on development along and within the shoreline and San Luis Rey River area:

- Coastal bluff development shall be permitted if the design and setbacks are adequate to ensure stability for the expected design life of the development, and measures are taken to control run-off, foot traffic, irrigation, or other activities that could aggravate erosion problems.
- In order to protect life and property in the river area from flood hazards, the City shall:
  - Prevent encroachment of permanent structures into the floodway.
  - Allow only flood compatible uses and structures, per the Federal Flood Insurance Agency's regulations, within the 100-year floodplain.

  - Cooperate with Army Corps of Engineers to ensure completion of the flood control project, as proposed.
- To protect life and property in the river area from geologic hazards:
  - Stabilize or remove the vertical cut-slope in the northwestern corner of Lawrence Canyon, in conjunction with development of that site.
- Require new bluff-top development in the river area to maintain an adequate setback from the bluff edge and, where necessary, erect barriers along the bluff to maintain public safety

Corridor LCP policies regarding site and soil stability for proposed rail and highway improvements would be addressed by the TREP/PWP through developing and implementing Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit requirements. As the program improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would minimize construction of undisturbed, and potentially unstable steep topography. Other potential impacts associated with topography, excessive erosion, and construction activities would be addressed with construction-phase BMP requirements, which would serve to minimize uncontrolled site runoff and erosion and ensure site stability.

Potential impacts associated with drainage and flooding would be addressed, in large part, through design of rail and highway facilities. As noted previously, many of the proposed rail improvements (e.g., San Dieguito Double Track and Bridge Replacement, Sorrento Valley Double Track) will elevate the track over existing drainage and flood areas to address drainage and flooding concerns. It is expected that crossings over the corridor's waterbodies would be spanned either by bridges or culverts or, in the case of Del Mar and University Town Center, by improvements involving deep tunnels that would avoid surface floodplains. Design and development strategies for rail improvements provide that future project-level analysis for proposed rail improvements would assess floodplain hydrology/hydraulics and evaluate the impacts of specific designs on water surface elevations, flood conveyance, and potential flooding risk. Where feasible, construction of facilities within floodplains would be avoided, or the footprint of facilities within the floodplain would be minimized.

Further, environmental documentation and technical studies for proposed highway improvements concluded that highway improvements would have a negligible effect on drainage and floodplains in the corridor and would result in improved drainage and flood conveyance at Carmel Valley Creek, Batiquitos, Buena Vista, and San Elijo Lagoons. Proposed highway improvements would not include construction of new pipes, box culverts, or underground channels that would adversely affect significant natural stream courses or cause drainage or floodplain impacts. Highway bridge improvements that would occupy areas within floodways in the corridor would be necessary to upgrade and protect existing or replacement crossing structures for continued public safety. Improvements would be designed to minimize necessary stream alternations. Other than placing necessary bridge support structures (abutments and/or pilings) and extending existing culverts, proposed highway improvements would not involve the construction of new structures that would alter drainage patterns.

Shoreline protection structures associated with the proposed improvements would be minor and would consist only of protection measures necessary to support existing and/or replacement facility crossings, where designed, to eliminate or minimize impacts to shoreline processes. It is recognized that there is a need for the existing, permitted shoreline protection system at the Del Mar bluffs to protect the existing rail facility, and that this system could require maintenance to maintain site stability and rail operations in this area. It is also recognized that some shoreline alteration at bridge abutments and

piles could be required where rail facility bridges cross waterbodies throughout the corridor. To ensure this development continues to be maintained and developed consistent with applicable LCP policies, the TREP/PWP specifies that shoreline armoring should only be allowed to protect existing, legal structures, or where necessary for replacement structures across waterbodies, that are proven to be in danger from erosion, and only if: (a) less-environmentally damaging alternatives to armoring are not feasible (including relocation of endangered structures); and (b) the armoring has been sited, designed, and accompanied by feasible measures to proportionately mitigate any unavoidable negative coastal resource impacts (on views, sand supply, public access, etc.).

Drainage and flooding impacts associated with the highway improvements would be negligible, which would in turn minimize potential adverse impacts associated with alteration and channelization of shorelines and/or floodplains and associated erosion. Other than necessary protection structures placed at the base of bridge support structures (abutments and/or pilings), proposed highway improvements would not involve the construction of new or expanded shoreline protective devices that would alter natural landforms or shorelines and result in associated shoreline erosion. In cases where bridge structures would potentially be replaced and lengthened (San Elijo Lagoon) and where culvert removal is proposed at Carmel Valley Creek, removal of existing bridge abutment and culvert structures would result in restoring a more natural shoreline at the facility crossing.

The NCC TREP/PWP specifies that the potential impact of sea level rise associated with global climate change be considered in the design and/or refurbishment of all highway infrastructure. Caltrans has demonstrated that the proposed I-5 bridge replacement projects are designed to accommodate the anticipated increase in mean sea level rise through the year 2100, which would minimize the structures' exposure to increased storm surge, wave uprush, and flooding. The TREP/PWP further specifies that project-specific rail and highway and community enhancement improvements that may be subject to shoreline erosion, tidal inundation and flooding should include an analysis of improvement location and design in relation to projected future changes in sea level rise to ensure new development is located and designed to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected design life of the structures (75 years). These analyses would ensure that the proposed improvements are located and designed to address potential hazards associated with the anticipated increase in mean sea level rise, based on the most current sea level rise projections and data available at the time of project implementation.

In addition, the TREP/PWP calls for protection against the spillage of crude oil, gas, petroleum products, or hazardous substances, and that effective containment and cleanup facilities and procedures be in place for accidental spills that could occur.

As discussed above, TREP/PWP improvements would minimize risks to life and property in areas of high geologic hazards, assure project and site 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 shoreline protective devices that would substantially alter natural landforms along bluffs and cliffs. As such, the TREP/PWP is consistent with applicable LCP policies addressing geology, soils, seismicity, topography, drainage and flooding, shoreline erosion, and hazardous wastes and, therefore, these policies would not need to be amended for implementation of the proposed transportation facility improvements.

5.9 AGRICULTURAL RESOURCES

5.9.1 Agricultural Resources in the Corridor

Agricultural resources in the NCC consist of various types of farmland as defined by the California Department of Conservation (DOC), Division of Land Resource Protection, and the USDA Natural Resources Conservation Service (NRCS). They are accessed and mapped statewide on an ongoing and regular basis and are defined as follows:

- Prime Farmland is defined as land that has been used for irrigated agricultural production at some time during the four years prior to the Important Farmland Map date. In addition, Prime Farmland must also meet the physical and chemical criteria as determined by the NRCS.
- Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops. It may have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.
- Unique Farmland is defined as land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, but land that has been used for the production of specific high economic value crops at some time during the two update cycles prior to the mapping date. This land has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained, high quality and/or high yields of a specific crop when treated and managed according to certain farming methods.
- Farmland of Local Importance is categorized as land that is either currently producing crops, has the capability of producing crops or is used for the production of confined livestock, and may be important to the local economy due to its productivity or value. Further, other agricultural lands are designated as such if they are subject to Williamson Act contract or agriculture preserve.

While there are larger tracts of land in northern San Diego County that support a significant agricultural economy and agricultural resources, overall, agricultural operations in San Diego County tend to be smaller than elsewhere in California. The trend in San Diego County is smaller farms or smaller acreages for production. In 1992, 65% of the farms in San Diego County were less than 9 acres, which was less than one-quarter of the statewide average farm size of 373 acres.[1] In 2008, that percentage had increased to 68%.[2] Agriculturalists in San Diego have specialized in producing agricultural products in a relatively urbanized area by growing high-dollar-value per-acre crops such as nursery and greenhouse crops. Within the corridor, the agricultural parcels are relatively isolated areas supporting agricultural activities that are, for the most part, surrounded by various urban uses and open space areas in keeping with the overall agricultural trend in the county. Agricultural lands in the corridor generally occur adjacent to lagoon areas and associated open space, and in various patches throughout the otherwise urban landscape.

A majority of agricultural lands in the corridor, especially in Encinitas and Solana Beach, consist of nursery and greenhouse operations. These types of agriculture are relatively unaffected by typical urban/agricultural interface issues and encroachment. Because the cultivation occurs in structures and in pots not soils, it is the coastal climate that provides the resource and benefit to these types of agricultural commodities as opposed to cultivated land.

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1 http://www.sdcounty.ca.gov/reusable_components/images/awm/Docs/stats_sdagriculture.pdf
2 San Diego County, 2008 Crop Statistics and Annual Report

5.9.1.1 LOSSAN Rail Corridor Resources

The *LOSSAN Final Program EIR/EIS* (September 2007) for the LOSSAN rail corridor improvements indicates that there are some agricultural lands within the LOSSAN rail corridor near Oceanside, which include Prime Farmlands and Farmlands of Local Importance. A number of properties designated as Unique Farmland, and some lands that are not designated but are under active cultivation (greenhouses/nursery plants), are located adjacent to and east of the rail corridor in Encinitas, just south of Batiquitos Lagoon (Figure 5.9-1C). An additional site that is not designated but is also under active cultivation (greenhouses/nursery plants) is located adjacent to and west of the rail corridor in Carlsbad, south of Agua Hedionda Lagoon (Figure 5.9-1D).

5.9.1.2 I-5 Highway Corridor Resources

A Community Impact Assessment (CIA), dated October 2007, was used to prepare the *I-5 NCC Project Draft EIR/EIS* (June 2010) to identify existing agricultural resources and potential project impacts to agricultural resources. For the purposes of analyzing potential impacts to agricultural resources, the study area encompasses a 0.5-mile radius from the centerline of the existing I-5 highway, and agricultural resources have been assessed for each of the cities.

San Diego

A limited amount of agricultural activity occurs within San Diego, the majority of which is located within the northern and eastern parts of the city. The southernmost portion of a parcel currently used for agricultural production and designated as Farmland of Statewide Importance is located directly adjacent to and east of the highway, south of San Dieguito Lagoon in the North City Future Urbanizing Area Framework Plan area (Figure 5.9-1A).

Del Mar and Solana Beach

There are currently no designated agricultural lands in Del Mar and Solana Beach; however, Solana Beach has a very small amount of greenhouse and nursery agriculture (Figure 5.9-1B). Though both of these cities once contributed to the agricultural production of the region, rapid growth has led to the subsequent development of these agricultural lands primarily for urban uses.

Encinitas

As compared to the other cities in the corridor, a relatively large amount of land within Encinitas is devoted to some form of agricultural use, some of which lie adjacent to the I-5 highway corridor. These lands include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and lands subject to Williamson Act contract and agriculture preserve (Figure 5.9-1B and Figure 5.9-1C). The majority of agricultural uses within the city are in the form of nurseries or greenhouses, which are unaffected by the adjacent non-agricultural uses.

NORTH

- LOSSAN and I-5 Project Buffer Area
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Proposed Platform
- City Boundary

0 500 1,000 2,000 Feet

FMMP Farmland Type

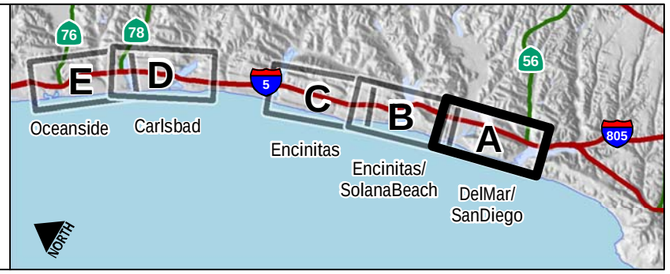
- Prime Farmland
- Farmland of Statewide Importance
- Farmland of Local Importance
- Unique Farmland

Cultivated Agriculture

- Greenhouse/Nursery Plants
- Other Cultivated Agriculture

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 Jursidictions, SanGIS, SANDAG, California Dept Conservation, San Diego County, Imagery: DigitalGlobe March 2008

FIGURE 5.9-1A

Agricultural Resources (City of Del Mar / San Diego)

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

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NORTH

- LOSSAN and I-5 Project Buffer Area
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary

0 500 1,000 2,000 Feet

FMMP Farmland Type

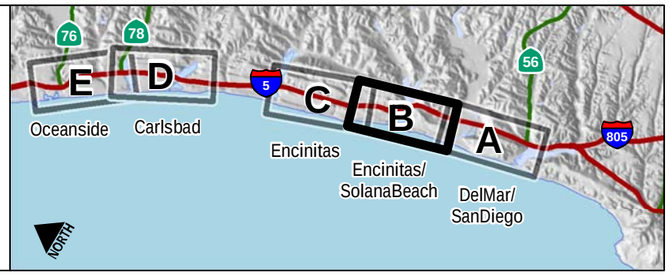
- Prime Farmland
- Farmland of Local Importance

Cultivated Agriculture

- Greenhouse/Nursery Plants
- Other Cultivated Agriculture

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Coastal Zone Boundary



DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, California Dept Conservation, San Diego County, Imagery: DigitalGlobe March 2008

FIGURE 5.9-1B

Agricultural Resources (City of Encinitas / Solana Beach)

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

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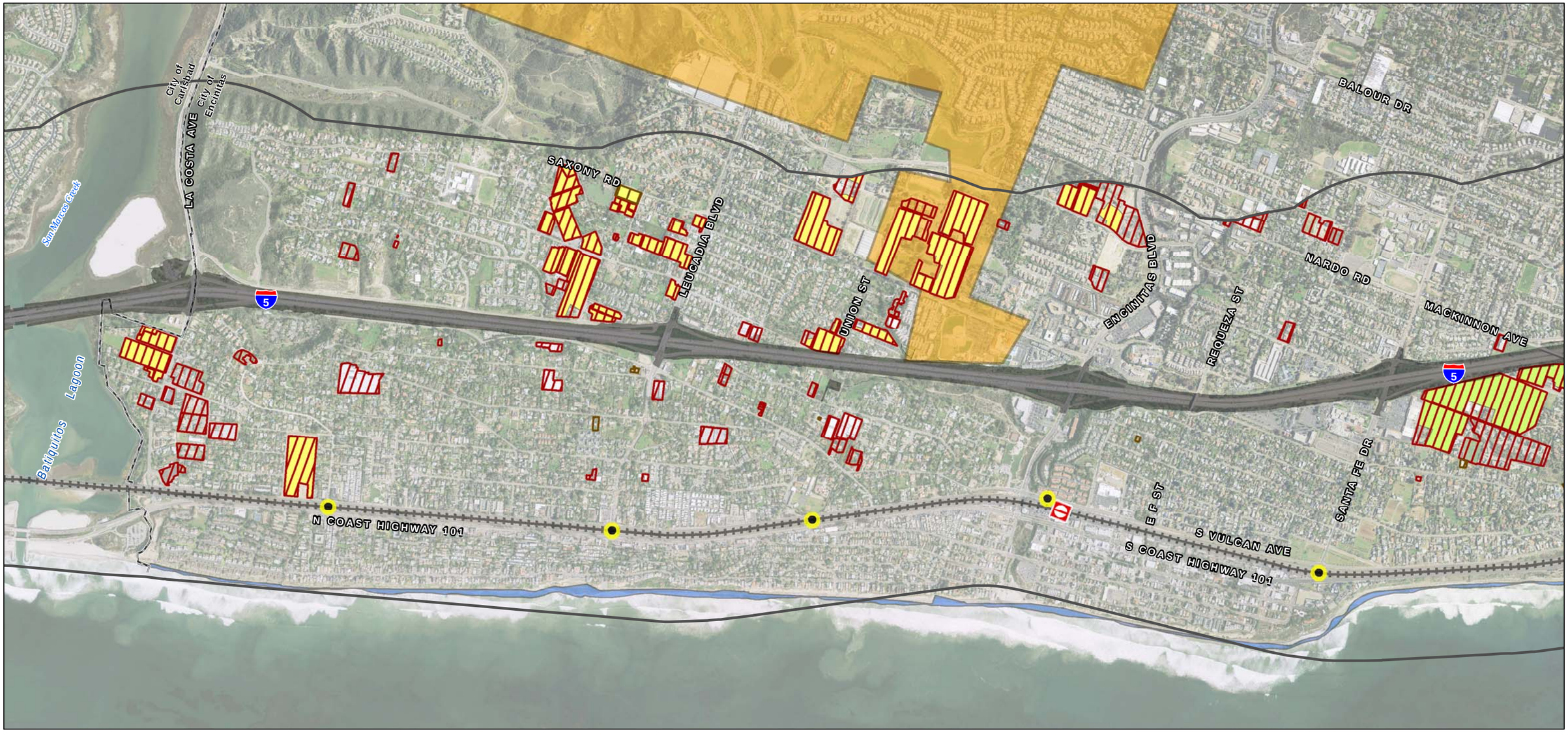


NORTH

0 500 1,000 2,000 Feet

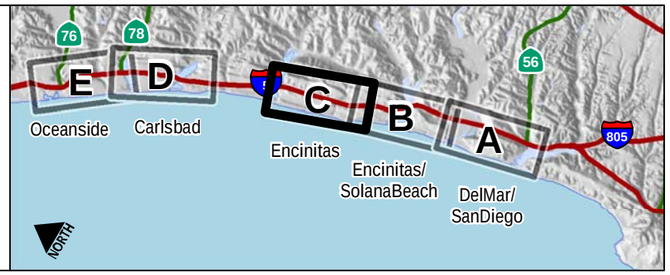
- LOSSAN and I-5 Project Buffer Area
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary

FMMP Farmland Type
- Farmland of Local Importance
- Unique Farmland

Cultivated Agriculture
- Greenhouse/Nursery Plants
- Other Cultivated Agriculture

Williamson Act
- Agricultural Preserve

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



DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, California Dept Conservation, San Diego County, Imagery: DigitalGlobe March 2008

FIGURE 5.9-1C

Agricultural Resources (City of Encinitas)

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

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A parcel of active agricultural land designated as Prime Farmland, which is often cultivated with strawberries and flowers, is located east of I-5 at Manchester Avenue. Anderson's La Costa Nursery and West Coast Nurseries are designated as Unique Farmland, although the properties are designated for residential use,[3] and are located south of Batiquitos Lagoon approximately 220 feet west of I-5 and north of La Costa Avenue. Weidners' Gardens and Samia Rose Topiary are also designated Unique Farmland and are located adjacent to and east of I-5 and north of Leucadia Boulevard. The Leucadia Nursery and Emerald M. Growers, both of which are designated as Unique Farmland, are located north of and adjacent to Leucadia Boulevard and east of I-5. Two Unique Farmland properties that house greenhouse and nursery operations (Florabunda and Pacific Verde Nursery) are located east of and adjacent to I-5 at Union Street. Paul Ecke Ranch, the world's largest poinsettia producer, consists of Unique, Prime, and Farmland of Statewide Importance, as well as lands under Williamson Act contract, and is located 0.25 mile east of I-5 south of Puebla Street. Sunshine Gardens, a nursery and greenhouse operation designated as Unique Farmland, is located 0.25 mile east of I-5 at Encinitas Boulevard. Three greenhouse operations located near the proposed project are not designated as Important Farmland. These include the Cal Pacific Orchid Farm west of I-5 on Orpheus Avenue, the Jungle Music Nursery located immediately west of I-5 on Ocean View Avenue, and a greenhouse located north of Puebla Street.

Carlsbad

A sizeable quantity of agricultural land also occurs within Carlsbad (Figure 5.9-1D). Two greenhouse and agricultural operations designated as Unique Farmland are located in north Carlsbad. A greenhouse and agricultural operation is located south of Buena Vista Lagoon, east of I-5 and south of Jefferson Street. The Miles Pacific Nursery is located approximately 0.4 mile east of I-5, north of Carlsbad Village Drive.

Larger parcels of agricultural land in Carlsbad are located south of Agua Hedionda Lagoon. FlowerFields (approximately 330 acres) is located 0.25 mile east of I-5 between Legoland and the Carlsbad Company Stores, and consists of the only property subject to Williamson Act contract in the city and is designated as Prime and Unique Farmland. A contiguous section of agricultural land is located south of Agua Hedionda Lagoon and bound by I-5 to the west, Cannon Road to the south, and open space to the east. This portion of land is designated as Prime Farmland and Farmland of Statewide Importance and is used primarily for strawberries but also supports flower production. A parcel of Farmland of Local Importance, which houses greenhouses and some agricultural uses, is located adjacent to and west of I-5 along Avenida Encinas.

Oceanside

There are no designated agricultural lands in the study area within Oceanside; however, inland of the NCC the entire northeast portion of the city is designated for agricultural uses (Figure 5.9-1E). The agriculture industry in Oceanside is valued at approximately $12 million annually, which accounts for approximately 10% of San Diego County's agricultural output. Major crops within Oceanside, as well as the region, include tomatoes, avocados, citrus, and nursery stock.

5.9.2 TREP/PWP Concerns

Environmental documentation and analysis prepared for the proposed rail and highway corridor improvements confirm that a number of agricultural lands supporting a variety of agricultural resources

[3] City of Encinitas, 1989

occur in the corridor and in areas potentially affected by the proposed improvements. Potential impacts of the proposed rail and highway improvements to agricultural resources could occur from direct displacement of agricultural lands or operations due to expanded or modified facility footprints and/or due to temporary displacement due to construction/assembly and construction staging areas that may be proposed within an area currently used for agricultural production.

5.9.2.1 LOSSAN Rail Corridor Impact Assessment

Proposed rail improvements would occur adjacent to areas designated as Unique Farmland and Farmland of Local Importance in Encinitas and Carlsbad, respectively; however, in these areas, proposed rail improvements would occur within the existing rail corridor ROW and, therefore, impacts to the adjacent agricultural lands are not anticipated. Temporary impacts to agricultural resources however could result from temporary conversion of important agricultural lands or other temporary disruption of agricultural activities during construction due to construction/assembly and construction staging areas that may be proposed within an area currently used for agricultural production.

5.9.2.2 I-5 Highway Corridor Impact Assessment

Impacts to agricultural lands from proposed highway improvements would occur in the cities of San Diego, Encinitas, and Carlsbad. The proposed highway improvements would affect approximately 35 total acres of Prime Farmland, non-Prime Farmland identified as Unique Farmland, and lands currently in agricultural production but not designated as Important Farmland.

San Diego

The proposed highway improvements within San Diego would result in encroachment and edge impacts along the existing I-5 highway corridor to an area of designated Farmland of Statewide Importance that is located directly south of San Dieguito Lagoon in the North City Future Urbanizing Area Framework Plan area. The property is currently in agricultural production. Potential impacts would be restricted to the western edge of the operation and would not adversely affect the productivity of the site nor would the proposed improvement preclude continued agricultural activities on the remainder of the site.

Encinitas

The proposed highway improvements within Encinitas would include a new transit facility and direct access ramp (DAR) at Manchester Avenue, which would affect active agricultural fields east of and adjacent to I-5. The proposed transit facilities would encroach into a 30.5-acre property designated as Prime Farmland that is actively farmed and often cultivated with strawberries and flowers. The proposed highway facilities would affect approximately 18.5 acres of the western portion of the Prime Farmland adjacent to I-5. The remaining 12 acres, which are located on a more eastern slope of the parcel, could continue agricultural production. Coordination between Caltrans and the landowner would occur to determine the possibility of continuing agricultural operations.

Proposed highway improvements would also affect the western edge of two Unique Farmland properties that house greenhouse and nursery operations (Florabunda and Pacific Verde Nursery) that are located east of, and adjacent to, I-5 at Union Street; however, the project encroachments would only affect the edge of the facilities and would not preclude agricultural activities in the greenhouses or nursery on the remainder of the parcels.

NORTH

- LOSSAN and I-5 Project Buffer Area
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Overcrossing Improvements
- LOSSAN Rail Station
- City Boundary

0 500 1,000 2,000 Feet

FMMP Farmland Type

- Prime Farmland
- Farmland of Statewide Importance
- Farmland of Local Importance
- Unique Farmland

Cultivated Agriculture

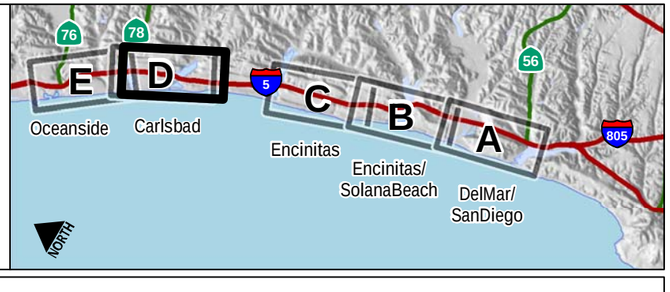
- Greenhouse/Nursery Plants
- Other Cultivated Agriculture

Williamson Act

- Agricultural Preserve
- Williamson Act Parcel

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 Jursidictions, SanGIS, SANDAG, California Dept Conservation, San Diego County, Imagery: DigitalGlobe March 2008

FIGURE 5.9-1D

Agricultural Resources (City of Carlsbad)

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

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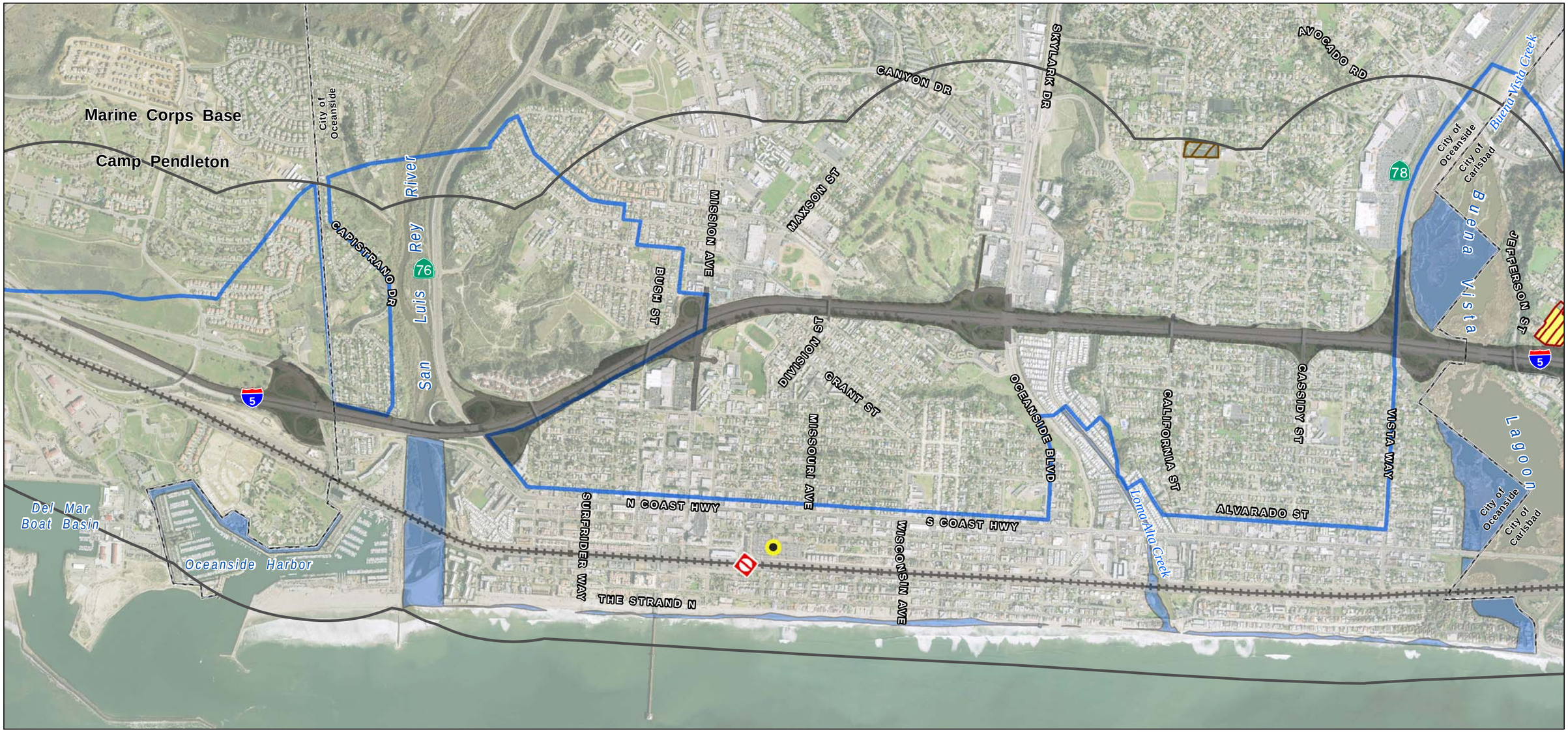


NORTH

0 500 1,000 2,000 Feet

- LOSSAN and I-5 Project Buffer Area
- I-5 Project Area
- LOSSAN Project Area
- LOSSAN Rail Station
- LOSSAN Overcrossing Improvements
- City Boundary

FMMP Farmland Type

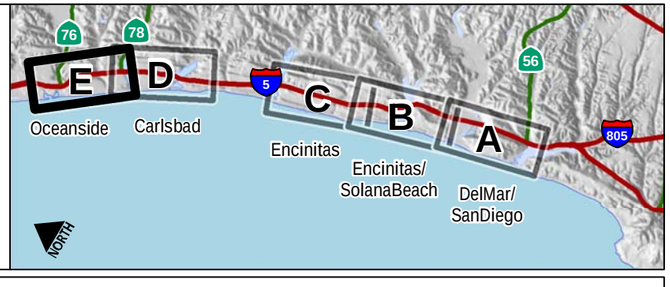
- Unique Farmland

Cultivated Agriculture

- Greenhouse/Nursery Plants
- Other Cultivated Agriculture

Coastal Zone Permit Areas

- Coastal Commission Permit Jurisdiction
- Coastal Zone Boundary



DATA SOURCES: Caltrans, California Coastal Commission, Local Jursidictions, SanGIS, SANDAG, California Dept Conservation, San Diego County, Imagery: DigitalGlobe March 2008

FIGURE 5.9-1E

Agricultural Resources (City of Oceanside)

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

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No other designated farmlands would be affected by the proposed project. A corner of property containing a greenhouse not designated as farmland would be directly affected by the highway improvements but would not preclude continued operations of the business at the site.

Carlsbad

Proposed highway improvements would directly affect approximately 16 acres of agricultural land within Carlsbad, of which 14 acres are designated as Prime Farmland and 2 acres are Unique Farmland. These impacts would consist of a minor encroachment into the western edge of a greenhouse and agricultural operation located adjacent to, and east of, I-5, south of Jefferson Street and south of Buena Vista Lagoon. The west edge of the facility would be directly affected by the roadway expansion, but it is a small portion of the site and would not preclude continued agricultural operations. In addition, the proposed highway improvements would encroach into a property currently in cultivation for strawberries and/or flowers, which is designated as Prime Farmland and Farmland of Statewide Importance, located south of Agua Hedionda Lagoon and bound by I-5 to the west, Cannon Road to the south, and open space to the east; however, the impact is linear in nature along the western edge of the property and would not bisect or preclude continued agricultural operation of the larger parcel.

The proposed project would encroach into the eastern edge of existing agricultural fields located adjacent to, and west of I-5, along Avenida Encinas. The property is designated as Farmland of Local Importance and includes greenhouses and some agricultural uses. While the proposed project would encroach into the eastern edge of existing agricultural fields, the greenhouses and other structures located to the north of the parcel would not be displaced and agricultural operations would continue on the site.

Temporary, construction-related impacts to agricultural resources throughout the corridor could result from conversion of important agricultural lands or other disruption of agricultural activities due to construction/assembly and construction staging areas that may be proposed within an area currently used for agricultural production.

In addition, Caltrans is currently pursuing opportunities to acquire properties in the corridor for purposes of implementing the Resource Enhancement Program (discussed in Chapter 6) to help restore, enhance, and expand coastal wetlands, freshwater wetlands, and upland areas. As part of the TREP/PWP, the mitigation sites would be acquired and restored or preserved for purposes of habitat enhancement and/or preservation to offset potential resource impacts of the proposed highway and rail improvements and, where feasible, to improve already degraded resources. Potential mitigation sites could include properties designated, currently, or previously used for agricultural purposes, which could affect agricultural resources.

5.9.3 TREP/PWP Opportunities, Design/Development Strategies and Policies/Implementation Measures

5.9.3.1 LOSSAN Rail Corridor Design/Development Strategies

Proposed rail improvements shall protect and minimize impacts to agricultural resources consistent with Sections 30241 and 30242 of the Coastal Act. Where new development may potentially adversely impact agricultural resources, appropriate mitigation measures shall be required and implemented. Because project-level analysis for proposed rail improvements will not occur until project alternatives are chosen, preliminary design, engineering, and resource impact analyses have been developed, and mitigation measures and monitoring plans prepared, the analysis contained herein for the proposed rail improvements includes discussion and analysis of conceptual plans, a preliminary resource impact

assessment and design and development strategies to address potential resource impacts. No impacts to agricultural resources from proposed rail improvements have been identified at this time. As proposed rail improvement plans are further developed, additional design and development strategies to address potential impacts to agricultural resources would be evaluated by the Lead Agency for project-specific rail improvement proposals pursuant to future environmental and phased federal consistency review, when applicable.

5.9.3.2 I-5 Highway Corridor Opportunities

Enhanced Pedestrian Overpass Connection on Bush Street. The TREP/PWP includes a community enhancement project in Oceanside that would connect the existing community gardens at Civic Center Drive and Witzel Street across an enhanced overpass and follow the freeway in a linear park to Mission Avenue. This project would extend existing, currently thriving community gardens and join the communities separated by I-5 with a new sidewalk and widening of existing sidewalks, a paved trail from the east side of the bridge along the on-ramp to Buena Street, and new and improved lighting and landscaping.

5.9.3.3 I-5 Highway Corridor TREP/PWP Policies

In addition to the opportunity to connect and extend existing community gardens at Civic Center Drive and Witzel Street across an enhanced overpass to Mission Avenue in Oceanside, Caltrans would implement the following policy and implementation measures to ensure that proposed improvements are designed, implemented, and maintained to provide for maximum protection of agricultural resources. Notice of Impending Development (NOID) submittals for highway, community, and resource enhancement project implementation that would potentially impact agricultural resources as identified on Figure 5.9-1A–E should demonstrate compliance with the following policy and implementation measures.

Policy 5.9.1: New highway development and associated community enhancement and habitat restoration improvements should protect and minimize impacts to agricultural resources. Where new development may potentially adversely impact agricultural resources that would financially and operationally compromise the affected agricultural areas or financially or operationally impair adjacent agricultural operations, appropriate mitigation measures should be required and implemented.

Implementation Measure 5.9.1: Permanent impacts to land designated as Prime Farmland as identified on Figure 5.9-1A–E should be mitigated by payment of an Agricultural Resource Impact Mitigation Fee. The fee should be based on net acreage of affected Prime Farmland and should reflect the approximate cost of preserving Prime Farmland elsewhere in the Coastal Zone. Mitigation fees may be deposited with the State Coastal Conservancy Fund or the County of San Diego, as applicable, and should be expended in the following order of priority:

- Purchase of agricultural lands for continued agricultural production within the Coastal Zone.
- Agricultural improvements that will aid in continuing agricultural production within the Coastal Zone.
- Investing in an agricultural land holding, operation, conservation easement or project in the County of San Diego that has been identified as a high priority project by the Agricultural Commissioner's Office or the San Diego County Farm Bureau
- Committing to specific activities such as school and community gardens, farm to school programs, and/or endowments to programs of study in agricultural sciences in the Coastal Zone.
- If determined feasible and desirable by the County of San Diego, coordinating with the county to establish a fund to offset loss of Williamson Act subvention funds from the state for 2009/2010, which

would be used to assist the county in supporting agricultural resources and offsetting the lack of state subvention funds in 2009/2010 for the Williamson Act.

Implementation Measure 5.9.2: Construction staging and phasing plans should be prepared and submitted with each NOID for all highway improvement and associated community enhancement projects included in the TREP/PWP and should include information that specifies and quantifies any agricultural resource areas that may be impacted by temporary project construction activities. Temporary impacts to agricultural resources due to construction/assembly and construction staging areas for highway and community enhancement improvements, including temporary conversion of important agricultural lands or other temporary disruption of agricultural activities, should be fully mitigated by returning any affected area to pre-existing agricultural use after project construction is completed. Temporary impacts to agricultural resources due to construction/assembly and construction staging areas should not cause long-term reduction in productivity or conversion of the subject lands to non-agricultural use, which would result in a significant economic loss to the county's agricultural economy.

Implementation Measure 5.9.3: Plans for habitat restoration on properties supporting existing agricultural uses should be prepared and submitted with the applicable NOID for restoration activities, and should include information that specifies and quantifies any important agricultural resource areas that may be impacted by restoration activities. If determined by the Coastal Commission that restoration activities would adversely affect Prime Farmland, such impacts should be fully mitigated pursuant to Implementation Measure 5.9.1.

5.9.4 Coastal Act Consistency

Coastal Act Section 30241

The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the area's agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

(a) By establishing stable boundaries separating urban and rural areas including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban uses.

(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.

(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.

(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.

(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

(f) Assuring that all divisions of prime agricultural lands, except those conversions pursuant to subdivision (b) of this section, and all development adjacent to the prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Coastal Act Section 30241.5

(a) If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 30241 as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation containing at least both of the following elements:

(1) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

(2) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

For purposes of this subdivision, "area" means a geographic area of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for those lands included in the local coastal program or in the proposed amendment to a certified local coastal program.

(b) The economic feasibility evaluation required by subdivision (a) shall be submitted to the commission, by the local government, as part of its submittal of a local coastal program or an amendment to any local coastal program. If the local government determines that it does not have the staff with the necessary expertise to conduct the economic feasibility evaluation, the evaluation may be conducted under agreement with the local government by a consultant selected jointly by local government and the executive director of the commission.

Coastal Act Section 30242

All other lands suitable for agricultural use shall not be converted to non-agricultural uses unless: (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Sections 30241 and 30242 of the Coastal Act require that the maximum amount of agricultural land be maintained in agricultural production and that conflicts between urban and agricultural land uses be minimized through means such as, but not limited to: establishing stable urban-rural boundaries, limiting conversion of agricultural lands around the periphery of urban areas to those lands where the viability of existing agricultural use is already severely limited, permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250, assuring that public service and facility expansions do not impair agricultural viability, either through degraded air and water quality, and assuring that development adjacent to prime agricultural lands does not diminish the productivity of those lands. In addition, Section 30242 of the Coastal Act protects non-prime agricultural lands from conversion to non-agricultural use unless continued agricultural use is not feasible, or the conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any permitted conversion of agricultural land is required to be compatible with continued agricultural use on surrounding lands.

5.9.4.1 TREP/PWP Agricultural Resource Impacts

Proposed highway improvements would result in impacts to agricultural resources as described above. As the existing location of the NCC highway facilities requires that some TREP/PWP improvements occur

in areas directly adjacent to or within agricultural lands and/or operations, it is infeasible to avoid all impacts to agricultural resources during construction of the proposed improvements. Coastal Act Section 30241 allows "the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250." Section 30250, in turn, allows development "located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it." All of the TREP/PWP improvements are contiguous with or in close proximity to existing developed areas and are wholly consistent with Section 30250 of the Coastal Act as discussed in the following section. Thus, the TREP/PWP does not appear to conflict with the Coastal Act's policies regarding agricultural resources.

However, should the TREP/PWP improvements be found inconsistent with the Coastal Act's agricultural resource protection policies due to the impacts to agricultural lands described in this section, the TREP/PWP may nonetheless be approved under the Coastal Act's conflict resolution provisions. Issues associated with potential TREP/PWP conflicts with Sections 30241 and 30242 of the Coastal Act are evaluated in detail in Section 5.10, Coastal Act Policy Conflict Resolution.

As detailed in Section 5.10, assuming the proposed TREP/PWP are found to be inconsistent with Sections 30241 and 30242 but the TREP/PWP can be found consistent with the Coastal Act through the conflict resolution provision of Coastal Act Section 30007.5, it must be demonstrated that no other feasible, less-damaging alternative exists for project components that would result in unavoidable impacts to agricultural resources, and that feasible mitigation measures have been included in the TREP/PWP to minimize substantial adverse impacts to agricultural resources.

Evaluation of Feasible Alternatives

Section 5.10, Coastal Act Policy Conflict Resolution, includes a programmatic analysis of project alternatives proposed to address mobility deficiencies and enhance multi-modal access throughout the corridor. Based on this analysis, the program of rail and highway improvements included in the TREP/PWP provides the least environmentally damaging, feasible project alternative to avoid or reduce impacts to coastal resources. The proposed TREP/PWP improvements would consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to existing highway facilities would generally be expansions or reconfigurations of existing facilities; therefore, by design, the proposed TREP/PWP highway improvements would involve limited expansion or encroachment into agricultural resource areas that might otherwise occur if new transportation infrastructure were to be constructed as separate and distinct facilities from the existing highway ROW, or other arterial roads expanded outside of the main transportation corridor, to address mobility deficiencies and enhanced multi-modal access throughout the corridor.

Substantial work has been completed to-date to identify a range of feasible rail and highway improvement alternatives that meet the corridor's need and vision, and are the least environmentally damaging. Though impacts to agricultural resources are not anticipated for rail improvements, feasible project alternatives for rail improvements potentially affecting agricultural resources would be determined in project-level analyses and during phased federal-consistency review, as applicable. The project alternative analysis for highway improvements potentially affecting agricultural resources is part of the *I-5 NCC Project Draft EIR/EIS*. A public review period is underway, and consistent with applicable laws, the selection of a preferred alternative is expected to follow. Additional design-level alternatives analysis will be included in the Final TREP/PWP to evaluate the TREP/PWP highway improvements for consistency with Sections 30241 and 30242 of the Coastal Act prior to submittal to and action by the Coastal Commission.

Feasible Mitigation Measures

Section 5.9.3, described above, and the following consistency analyses for proposed rail and highway improvements demonstrate that feasible mitigation measures have been included in the TREP/PWP as project design features, design/development strategies for rail improvements, and/or policies and implementation measures for highway improvements to minimize all potential impacts to agricultural resources.

5.9.4.2 LOSSAN Rail Corridor Consistency Analysis

Proposed rail improvements would occur adjacent to areas designated as Unique Farmland and Farmland of Local Importance in Encinitas and Carlsbad, respectively; however, in these areas, proposed rail improvements would occur within the existing rail corridor ROW and therefore impacts to the agricultural lands are not anticipated. In addition, rail facilities are typically considered compatible land uses with agricultural areas given that there are relatively few sensitive receptors associated with agricultural uses that could be exposed to facility noise and vibration; therefore, the LOSSAN rail corridor improvements would have no impact on Prime Farmland or any permanent impact on other agricultural land or resources. Temporary impacts to agricultural resources, however, could result from conversion of important agricultural lands or other disruption of agricultural activities during construction due to construction/assembly and construction staging areas that could be proposed within an area currently used for agricultural production. As project-level information and project-specific environmental review has not yet been determined for the proposed rail improvements, design and development strategies for the rail improvements provide that, where new development could adversely affect agricultural resources, which would financially and operationally compromise the affected agricultural areas or financially or operationally impair adjacent agricultural operations, appropriate mitigation measures would be required and implemented. This provision would ensure rail project consistency with applicable agricultural resource protection policies should previously unidentified permanent or temporary project impacts to agricultural resources be determined during the project-specific review process.

5.9.4.3 I-5 Highway Corridor Consistency Analysis

Potential highway improvement impacts to agricultural resources would be avoided to the maximum extent feasible through project design, which would ensure the amount of ROW required for improvements would be the minimum amount of land required to fulfill the purpose and need of the project, as well as meet operational requirements of the highway. Wherever possible, the proposed project would follow within the existing I-5 highway corridor alignment to avoid and/or minimize impacts to farmland and agricultural lands, which would result in avoidance or only minimal encroachment of proposed highway improvements along the edges of agricultural lands located directly adjacent to the existing highway facilities. As such, the majority of proposed project encroachments onto lands containing agricultural resources would not substantially displace agricultural resources or disrupt or preclude continued agricultural operations of the properties.

According to the San Diego County Farm Bureau, the county has 312,766 acres of farmland. The Agricultural Commissioner's Office reports that the total number of acres of agriculture in the San Diego County Coastal Zone is 955 acres. Proposed TREP/PWP highway improvements would directly, cumulatively affect approximately 35 acres of Prime Farmland, non-Prime Farmland identified as Unique Farmland, and other lands currently in agricultural production but not designated as important farmland. This is less than 4% of the total amount of agricultural land in the San Diego County Coastal Zone.

Although the proposed highway improvements would result in permanent impacts to 35 acres of farmland, given the linear nature of the improvements, the majority of impacts would be contained to an

area directly adjacent to the existing highway, and therefore the project impacts would not substantially displace agricultural resources or disrupt or preclude continued agricultural operations of the affected properties. The incremental encroachment impacts on agricultural lands from proposed highway improvements would not result in substantial impacts to agricultural resources where the majority of agricultural production in the corridor already occurs on small, isolated lands in a relatively urbanized area. In addition, while the proposed highway improvements would directly affect agricultural resources in the corridor, the impacts would be minor when compared to the total amount of agricultural resources in the San Diego County Coastal Zone.

There are two locations in the corridor where project impacts to agricultural lands raise potential consistency issues with Sections 30241 and 30242 of the Coastal Act. These include agricultural lands adjacent to the highway that would be affected at Manchester Avenue in Encinitas (approximately 18.5 acres of Prime Farmland) and at Cannon Road in Carlsbad (approximately 14 acres of Prime and 2 acres of Unique Farmland). Potential impacts at the Manchester Avenue location could compromise the ability for the remaining 12 acres of Prime Farmland unaffected by the project to remain in agricultural production.

However, all impacts to agricultural resources in the corridor would be limited to conversion of agricultural land or operations surrounded by urban uses and, as discussed in more detail in Section 5.2 (Public Transit and Smart Growth), the proposed improvements and associated impacts would be necessary to concentrate and maintain anticipated development growth within and/or contiguous to the existing developed corridor, consistent with Section 30250 of the Coastal Act. By maintaining and, where feasible, improving the existing public transportation system within the corridor, new development would be concentrated and supported in an area of existing and adequate public services, which in turn would limit development sprawl into undeveloped areas. Any growth that would occur in the NCC would be supported by the proposed infrastructure improvements, would be infill or redevelopment, and would serve to replace growth that could otherwise occur at the urban fringe or beyond, resulting in development pressure on rural lands. Further, with implementation of the proposed TREP/PWP implementation measures, the project would create or preserve significant agricultural resources in other areas of the corridor and/or county. As such, the proposed TREP/PWP improvements, in conjunction with applicable agricultural implementation measures, would limit conversion of agricultural lands to isolated areas within the urban corridor (and to areas located directly adjacent to the highway facility), and would serve to concentrate anticipated development in the urban corridor and thus maintain a stable urban/rural boundary while creating or preserving significant agricultural resources within the county, consistent with Sections 30250, 30241A-C and 30242 of the Coastal Act.

Implementation Measure 5.9.1 of the TREP/PWP provides that unavoidable impacts to Prime Farmland are to be mitigated pursuant to the Agricultural Resource Impact Mitigation Fee program developed as part of the TREP/PWP. The proposed Agricultural Resource Impact Mitigation Fee program is similar to the Agricultural Conversion Mitigation Fee program included in Carlsbad's LCP, certified by the Coastal Commission in 1996 (as amended in 2000, 2002, 2003, and 2006) and implemented by the State Coastal Conservancy. This program has been successful in supporting the start-up of a farmers market in Carlsbad, and starting and maintaining school-to-farm programs and various school gardens. The TREP/PWP Agricultural Resource Impact Mitigation Fee program could contribute to additional efforts to support and maintain agricultural lands and practices within the San Diego County Coastal Zone, such as:

- Purchasing agricultural lands for continued agricultural production within the Coastal Zone.

- Improving agriculture in ways that would aid in continuing agricultural production within the Coastal Zone.
- Investing in an agricultural land holding, operation, conservation easement or project in the County of San Diego that has been identified as a high-priority project by the Agricultural Commissioner's Office or the San Diego County Farm Bureau.
- Committing to specific activities such as school and community gardens, farm to school programs, and/or endowments to programs of study in agricultural sciences in the Coastal Zone.
- If determined feasible and desirable by the County of San Diego, coordinating with the county to establish a fund that would be used to assist the county in supporting agricultural resources and offsetting the lack of state subvention funds in 2009/2010 for the Williamson Act.

The TREP/PWP Agricultural Resource Impact Mitigation Fee would provide a number of new opportunities to preserve and maintain a variety of agricultural resources and activities in the corridor. The opportunities would range from supporting efforts to preserve large agricultural lands and/or operations to extending or providing new community gardens as is being proposed for the community enhancement project in Oceanside (Enhanced Pedestrian Overpass Connection on Bush Street). In addition, it should be noted that with the fiscal constraints on the state's budget, the subvention funds provided to counties (and cities) through the state for parcels under the Williamson Act program have been suspended for the 2009–2010 Budget Year, and no date has been provided as to when counties and cities would again begin to receive subvention funds to ameliorate budget shortfalls. At this time, San Diego County has not taken a position on how it will handle loss of this revenue in its budget nor has it taken a position on how this will affect the Williamson Act program and agriculturalists that depend on the tax relief provided under Williamson Act contracts.[4] With this in mind, the TREP/PWP Agricultural Resource Impact Mitigation Fee could provide an opportunity to establish a fund to offset loss of Williamson Act subvention funds from the state.

Temporary impacts on agricultural resources could result from temporary conversion of important agricultural lands or other temporary disruption of agricultural activities during construction due to construction/assembly and construction staging areas that may be proposed within an area currently used for agricultural production. Pursuant to Implementation Measure 5.9.2 of the TREP/PWP, however, any temporarily affected agricultural areas or operations would be fully returned to pre-existing agricultural use after project construction is completed, without long-term reduction in productivity or conversion of the subject lands to non-agricultural use that could result in a significant economic loss to the county's agricultural economy.

In addition, Caltrans is currently pursuing opportunities to acquire properties in the corridor for purposes of implementing the Resource Enhancement Program to restore, enhance, and expand coastal wetlands, freshwater wetlands, and upland areas in the NCC. As part of the TREP/PWP, the mitigation sites would be acquired and restored or preserved for purposes of habitat enhancement and/or preservation to offset potential resource impacts of the proposed highway and rail improvements and, where feasible, to improve already degraded resources. Potential mitigation sites could include properties designated, currently, or previously used for agricultural purposes, which could affect agricultural resources. Implementation Measure 5.9.3 of the TREP/PWP requires that plans for habitat restoration on properties supporting existing agricultural uses be prepared and submitted with the applicable notice of impending development (NOID) for restoration activities, and that the plans would include information that specifies

[4] Personal communication, Anna Lowe, Department of Planning and Land Use, San Diego County, September 2009.

and quantifies any important agricultural resource areas that could be affected by restoration activities. Should it be determined by the Coastal Commission that proposed restoration activities would adversely affect Prime Farmland, Implementation Measure 5.9.3 requires that impacts to Prime Farmland be fully mitigated pursuant to the Agricultural Resource Impact Mitigation Fee program required per Implementation Measure 5.9.1 of the TREP/PWP.

Based on available project and environmental data and the policies and implementation measures included herein, the proposed highway improvements would be implemented such that the maximum amount of agricultural land in the corridor would be maintained in agricultural production and conflicts between urban and agricultural land uses would be minimized. While the existing and proposed highway facilities constitute developed land uses, the transportation facilities do not in and of themselves have the potential to define adjacent land uses as urbanized areas, and therefore the proposed highway improvements would not create a conflict between agricultural and urban land uses. In addition, where highway facility improvements have the potential to adversely affect agricultural resources, policies and implementation measures would be applied (as identified in this section) to ensure the impacts would be avoided or minimized and that impacts would be adequately mitigated such that the improvements would not result in substantial impacts to agricultural resources.

5.9.4.4 Coastal Act Consistency Analysis Summary

While proposed rail improvements would potentially affect adjacent agricultural resources in the corridor, the majority of program improvements would occur within the existing facility ROWs. In this regard, proposed rail improvements would avoid, to a large extent, potential impacts to agricultural resources through design.

Where proposed highway improvements would result in unavoidable impacts to adjacent agricultural resources, the long-term viability of the affected agricultural resources and operation would not be affected, with the one potential exception of a 30.5-acre Prime Farmland property in Encinitas, 12 acres of which would not be impacted by proposed improvements. All permanent impacts to Prime Farmland would be mitigated pursuant to the proposed Agricultural Resource Impact Mitigation Fee program.

Further, proposed highway improvements that would directly affect agricultural resources are necessary to maintain a critical coastal access corridor and public service while concentrating and maintaining anticipated development within and/or contiguous with the existing developed facility consistent with Section 30250 of the Coastal Act. In addition to maintaining the primary coastal access corridor in the NCC, the proposed highway improvements are critical to goods movement, which has a direct affect on the viability of agricultural operations in the region and the state. The majority of agricultural commodities in California are transported from farms to markets via ground transportation; thus, the ability to transport local agricultural commodities to large markets through vital arteries such as the I-5 is also critical to preservation and continued viability of agricultural operations in the NCC and throughout the Coastal Zone. Moreover, close proximity of transportation corridors to agricultural areas reduces costs associated with transporting commodities, and the reliability of these arteries is necessary to ensure delivery and equitable distribution of commodities and commensurate compensation to producers.

Based on available project and environmental data and the policies and implementation measures included herein, the proposed TREP/PWP improvements would protect agricultural resources in the NCC from substantial adverse impacts and is therefore consistent with Sections 30241 and 30242 of the Coastal Act.

5.9.5 Local Coastal Program Consistency

5.9.5.1 Local Coastal Program Consistency Analysis Summary

Appendix A includes detailed policy consistency analysis matrices for each certified LCP area that would be affected by the proposed corridor improvements. Certified LCPs for San Diego and Encinitas include policies that mirror, in part, the requirements of Sections 30241 and 30242 of the Coastal Act. Where TREP/PWP improvements would affect agricultural resources, the corridor LCPs include a variety of policies to implement the requirements of Sections 30241 and 30242 of the Coastal Act. LCPs for the cities of San Diego, Encinitas, and Carlsbad generally speak to preserving Prime Farmland and agricultural production.

City of San Diego

The City of San Diego LCP contains resource protection policies that address agricultural resources in the North City Land Use Plan, which would be applicable to those portions of proposed highway improvements that result in encroachment and edge impacts along the existing I-5 highway corridor to an area of designated Farmland of Statewide Importance that is located directly south of San Dieguito Lagoon in the North City Future Urbanizing Area Framework Plan area:

- Open space acquisition that facilitates conserving important agricultural land should receive priority.
- Prime productive agricultural lands should be retained in permanent agricultural zones.
- Adopt enabling legislation to permit owners of prime agricultural lands to take advantage of the provisions of the Williamson Act.
- Retain premium agriculturally productive land in agricultural usage.

Potential impacts would be restricted to the western edge of the operation and would not adversely affect the productivity of the site nor would the proposed improvements preclude continued agricultural activities on the remainder of the site. As such, the agricultural resource protection policies of the City of San Diego LCP do not present potential policy conflicts for the proposed TREP/PWP improvements and, therefore, these policies would not need to be amended to implement the proposed transportation facility improvements.

City of Encinitas

The City of Encinitas LCP designates a Special Study Overlay for Agricultural Land and includes the following policies to protect agricultural resources within the city and its sphere of influence:

- Preserve and promote the right to produce unique horticultural crops and community gardens.
- Encourage preserving “prime” agriculture lands within its sphere of influence.
- The Ecke Holdings, et. al., are within the City of Encinitas’ Coastal Zone sphere of influence … The City recognizes this land as “prime” agriculture suitability and as such, designates it for long term preservation as “Agriculture/Open Space Preserve.”
- Plan for compatible land uses within and adjacent to recreation areas, natural preserves, and agricultural areas.

The proposed highway improvements within Encinitas would, for the most part, result in encroachment and edge impacts along the existing I-5 highway corridor to agricultural land. These impacts would be restricted to the edge of the agricultural lands and would not adversely affect the productivity of the sites nor would the proposed improvements preclude continued agricultural activities on the sites; however,

proposed highway improvements would result in the loss of approximately 18.5 acres of Prime Farmland at Manchester Avenue, which could affect the ability for continued agricultural use of the property. As the City's LCP speaks to preserving prime agriculture lands, a potential policy conflict may occur requiring amendment to ensure consistency of the TREP/PWP improvements with the certified LCP.

As such, SANDAG and Caltrans may seek amendments to the City of Encinitas LCP, for which the standard of review would be Sections 30241 and 30242 of the Coastal Act, and thereby provide consistency of the TREP/PWP improvements with the City's LCP; however, it is recognized that a different conclusion could be reached regarding the TREP/PWP's consistency with Sections 30241 and 30242 of the Coastal Act, in which case SANDAG and Caltrans may seek amendments to the City of Encinitas LCP to allow for conflict resolution under Section 30007.5 of the Coastal Act. Section 5.10 evaluates the TREP/PWP improvements under the Coastal Act's conflict resolution provision (Section 30007.5). The conflict resolution analysis concludes that denying or modifying the TREP/PWP to avoid the impacts to agricultural resources discussed in this section would conflict with several other Chapter 3 policies of the Coastal Act and, should it be concluded that the TREP/PWP conflicts with the Coastal Act's agricultural resources provisions, approving the TREP/PWP is, on balance, the most protective of significant coastal resources.

City of Carlsbad

The City of Carlsbad LCP includes an extensive set of policies that address preserving and converting agricultural lands, and mitigating conversion of such lands when permitted pursuant to the LCP. As discussed in the Coastal Act consistency analysis above, the majority of agricultural resource impacts from the proposed improvement would be linear in nature and would result in minor, incremental encroachment into adjacent agricultural lands that would not adversely affect the agricultural productivity or operations of those lands. Proposed highway improvements would, however, result in the loss of approximately 14 acres of Prime Farmland and 2 acres of Unique Farmland at Cannon Road. The location of this impact would occur in the Agua Hedionda Lagoon planning area of the City, which is the only uncertified segment of the City's certified LCP. As such, the Coastal Commission retains permit jurisdiction in this area with the standard of review for the proposed improvements being the Chapter 3 policies of the Coastal Act.

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5.10 COASTAL ACT POLICY CONFLICT RESOLUTION

As detailed in Chapter 5, Sections 5.4, 5.5 and 5.9, the TREP/PWP improvements will result in fill of wetlands, impacts to ESHA, and impacts to agricultural resources. As discussed below, the TREP/PWP may be found consistent with the Coastal Act as these impacts would occur for purposes the Coastal Act allows and/or because the TREP/PWP complies with Chapter 3 policies to the extent necessary to achieve the basic state goals specified in Section 30001.5 of the Coastal Act. However, it is possible a different conclusion could be reached regarding the TREP/PWP's consistency with Coastal Act policies which limit uses within and impacts to wetlands, ESHA and agricultural resources. Irrespective of the conclusion as to whether the TREP/PWP improvements may be inconsistent with Coastal Act policies because of these impacts, denying or modifying the TREP/PWP would itself conflict with policies in Chapter 3 of the Coastal Act. As explained below, in the case of the North Coast Corridor TREP/PWP, denying or modifying the TREP/PWP to eliminate these potential inconsistencies would conflict with other Coastal Act policies that mandate protection of coastal resources by 1) minimizing energy consumption and vehicle miles travelled and protecting air quality; 2) concentrating new development in or adjacent to areas able to accommodate growth; 3) providing and enhancing transit and non-automobile circulation, and assuring that the potential for public transit is provided for high intensity uses; and 4) protecting and enhancing public access to the coast and enhancing shoreline and upland recreation areas in the Coastal Zone.

The Coastal Act recognizes through Sections 30007.5 and 30200(b) that conflicts may occur among Chapter 3 policies and provides that such conflicts may be resolved in a manner which on balance is the most protective of significant coastal resources.

> Coastal Act Section 30007.5
>
> The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.
>
> Coastal Act Section 30200(b)
>
> Where the commission or any local government in implementing the provisions of this division identifies a conflict between the policies of this chapter, Section 30007.5 shall be utilized to resolve the conflict and the resolution of such conflicts shall be supported by appropriate findings setting forth the basis for the resolution of identified policy conflicts.

As discussed further below, even if the TREP/PWP's impacts are considered inconsistent with Coastal Act policies, implementing the TREP/PWP is on balance most protective of significant coastal resources.

5.10.1 Potential Conflicts with Chapter 3 Coastal Act Policies

As summarized below, the TREP/PWP improvements appear to be consistent with Coastal Act Section 30233 (use limitations in wetlands) and Sections 30241 and 30242 (protection and preservation of agricultural resources), but the improvements are potentially inconsistent with Section 30240 of the Coastal Act (use limitations in ESHAs). Caltrans and SANDAG acknowledge there are arguments supporting the conclusion the TREP/PWP improvements would also be inconsistent with Coastal Act

Section 30233 and Sections 30241 and 30242. However, should the TREP/PWP improvements be found inconsistent with the these policies, denying or modifying the TREP/PWP would none the less conflict with other important Coastal Act policies, including Section 30253 (minimizing energy consumption and protecting of air quality), Section 30250 (concentrating new development in or adjacent to areas able to accommodate growth), Section 30252 (providing and enhancing transit and non-automobile circulation, and assuring that the potential for public transit is provided for high intensity uses), and Sections 30210, 30211, 30212, 30212.5, 30213, 30223, 30252, and 30254 (protecting and enhancing public access to the coast and enhancing shoreline and upland recreation areas in the Coastal Zone.).

5.10.1.1 TREP/PWP Potential Inconsistency with Coastal Act Policies related to Wetland, ESHA and Agricultural Resources

Wetlands (Section 30233)

As described in Section 5.4 of this Chapter, the existing location of the developed NCC rail and highway facilities requires that the TREP/PWP improvements occur in areas containing wetlands, and it is therefore infeasible to avoid all impacts to wetland areas during construction of the proposed improvements.

However, the TREP/PWP improvements appear to constitute incidental public services. As such, fill of wetlands resulting from proposed TREP/PWP improvements is permitted pursuant to Section 30233(a)(4) of the Coastal Act as long as there is no feasible, less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects.

Though the plain language of Section 30233(a)(4) seems to encompass the TREP/PWP improvements, there is an argument the TREP/PWP improvements are not an allowable use for fill. In *Bolsa Chica Land Trust v. Superior Court* (1999) 71 Cal.App.4th493, the Court of Appeal stated that roadway expansions may qualify as incidental public services, but only when needed to maintain existing traffic capacity. However, this portion of the opinion was not necessary for the decision, and is *dicta*. Moreover, the facts in *Bolsa Chica* are distinguishable from the facts here: in *Bolsa Chica*, the road widening appears to have been necessary to accommodate a specific non-public project located in the coastal zone. Here, in contrast, the TREP/PWP improvements will be needed whether or not additional development is approved in the coastal zone.

Despite the plain language of Section 30233(a)(4) and the fundamental distinction between the TREP/PWP and the improvements proposed in *Bolsa Chica*, Caltrans and SANDAG acknowledge it is possible to conclude that the TREP/PWP improvements could be found to fall outside of the incidental public improvements provisions which allow for wetland fill under Section 30233(a)(4). If the TREP/PWP improvements were found inconsistent with the Coastal Act's wetland policies, the TREP/PWP should nonetheless be approved under the Coastal Act's conflict resolution provisions as discussed below.

Environmentally Sensitive Habitat Areas (Section 30240)

As described in Section 5.5 of this Chapter, a number of proposed TREP/PWP trail improvements, potential community enhancement projects (improvements for nature centers) and contemplated habitat restoration plans are considered resource-dependent uses and therefore are permitted uses in ESHAs. However, the majority of the TREP/PWP improvements consist of public facility improvements, which are not typically been considered resource-dependent uses. As such, TREP/PWP improvements

which do not consist exclusively of resource-dependent uses are potentially inconsistent with the limited uses permitted in ESHAs as required by Section 30240 of the Coastal Act

Agricultural Resources (Sections 30241 and 30242)

As described in Section 5.9 of this Chapter, potential impacts of the proposed highway improvements to agricultural resources could occur from direct displacement of agricultural lands or operations due to expanded or modified facility footprints and/or due to temporary displacement due to construction/assembly and construction staging areas that may be proposed within an area currently used for agricultural production. Proposed rail improvements consist only of double tracking and would occur within the existing rail corridor ROW and, therefore, impacts to the adjacent agricultural lands are not anticipated. However, proposed highway improvements would result in unavoidable impacts to adjacent agricultural resources. Coastal Act Section 30241 allows "the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250." Section 30250, in turn, allows development "located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it." All of the TREP/PWP improvements are contiguous with or in close proximity to existing developed areas. Thus, the TREP/PWP does not appear to conflict with the Coastal Act's policies regarding agricultural resources.

Should the TREP/PWP improvements be found inconsistent with the Coastal Act's agricultural resource protection policies, the TREP/PWP should nonetheless be approved under the Coastal Act's conflict resolution provisions as discussed below.

5.10.1.2 Denial of the TREP/PWP would be Inconsistent with other Chapter 3 Coastal Act Policies which Mandate Resource Protection or Enhancement and is fully Consistent with such Policies

Denial of the TREP/PWP would conflict with several Chapter 3 Coastal Act policies. The TREP/PWP will extend transit service, facilitate smart growth, reduce congestion on the existing transportation system and provide and improve multi-modal transportation in the corridor, all of which inherently serve to minimize energy consumption, vehicle miles traveled, and air quality impacts. The proposed mobility improvements will also protect, promote and enhance public access and recreational resources in the corridor as mandated by the Coastal Act.

Energy, Vehicle Miles Traveled and Air Quality (Section 30253)

Coastal Act Section 30253 requires that new development minimize energy consumption and vehicle miles traveled, and that new development be consist with air pollution requirements.

As described in Section 5.1, the proposed TREP/PWP improvements will increase alternative transportation (such as trails, bike paths, transit, and shuttles) to minimize vehicle miles traveled., which will reduce energy consumption and emissions, including GHGs, consistent with requirements of the San Diego County Air Pollution Control District or the State Air Resources Board. Proposed rail improvements will reduce service delays and therefore reduce energy consumption and emissions from idling locomotives. The rail improvements will also allow increased frequencies of operation and reduced travel times which are correspondingly expected to increase ridership on LOSSAN passenger services and reduce energy consumption, vehicle miles traveled, and emissions. Though the proposed rail improvements will allow more rail trips, which will produce emissions, the rail improvements will likely reduce net overall emissions by reducing train idling time and shifting commuters from inefficient SOVs to rail travel.

Proposed highway improvements, including managed/HOV lanes, will have the following benefits that will reduce energy consumption, vehicle miles traveled, and air emissions:

- Reduce congestion and indirect, inefficient routing.
- Increase HOVs and bus rapid transit. Proposed highway improvements will concentrate existing and anticipated increased demand in highway travel on HOVs and bus rapid transit, thereby improving the competitiveness of these modes versus SOVs. Additional auxiliary and managed lanes, new and expanded park-and-ride facilities, improved bicycle and pedestrian features, ramp metering, and an improved transit-highway interface would improve traffic conditions, encourage alternative transportation modes, and reduce energy consumption and emissions as more people carpool or choose other modal options.
- Reduce the demand for new parallel roads or parallel road expansions in the Coastal Zone. I-5 will continue to become more congested without improvements, which likely would cause demand for new parallel roads. The TREP/PWP would substantially reduce or eliminate demand for new parallel or arterial facilities in the Coastal Zone.

In addition, the TREP/PWP includes trails, bike paths, and pedestrian improvements that will facilitate non-motorized circulation across the transportation facilities throughout the corridor, which will further reduce vehicle miles traveled, energy consumption, and emissions.

Denial or modification of the proposed TREP/PWP to fully resolve potential project inconsistencies with the Coastal Act would eliminate TREP/PWP improvements that are critical to protecting coastal resources as required by Coastal Act Section 30253. Travel demand in the corridor has degraded, and will continue to degrade the existing transportation infrastructure and services. Absent the proposed TREP/PWP improvements, existing and future deficiencies in the transportation facilities will result in reduced rail and auto reliability, increased travel time and corridor congestion, continued deficiencies in infrastructure for bicycle and pedestrian circulation, and increased energy consumption and corresponding air emissions associated with travel.

Concentrating New Development, Provision of Public Transit and Non-Automobile Circulation (Sections 30250 and 30252)

Coastal Act Section 30250 requires new development to occur in already developed areas, and areas with adequate public services to concentrate development away from undeveloped rural areas to avoid significant adverse effects, either individually or cumulatively, on coastal resources. Coastal Act Section 30252 requires the provision and enhancement of transit, including the potential for public transit for high intensity uses, and encourages the development of non-automobile circulation.

As described in Section 5.2, both the proposed rail and highway projects will increase capacity for travel in the corridor thereby reducing travel times and improving quality of service. The corridor is largely built-out and constrained by natural borders including the Pacific Ocean to the west, Camp Pendleton to the north, the dense UTC/Golden Triangle and Downtown San Diego to the south and the I-15 travelshed to the east; therefore, the proposed improvements will not induce growth. Corridor population and travel are expected to increase over the next 20 years with or without the TREP/PWP improvements. The proposed TREP/PWP improvements are located within existing transportation ROW and within a developed urban area and are intended to provide safe and adequate travel circulation for growth which is already planned and anticipated.

The North Coast Corridor contains more than a dozen planned and potential Smart Growth areas that are located at each of the LOSSAN rail corridor stations, with the exception of Sorrento Valley Station. Smart Growth areas are planned for higher density, mixed-use development that is pedestrian-friendly and transit-oriented. The proposed TREP/PWP includes transportation/transit infrastructure and service improvements intended to specifically serve these areas to help avoid increased traffic congestion,

reduced mobility, and a deteriorating quality of life. Allowing approved and concentrated growth to occur in the already urban corridor, supported by sufficient public infrastructure and services, would limit development sprawl into undeveloped or rural areas. Proposed TREP/PWP improvements to increase capacity and ridership on the existing LOSSAN rail corridor, add managed lanes on I-5 that allow for bus rapid transit (BRT) and encourage HOVs, and develop bike lanes, sidewalks and trails would encourage alternative modes of transportation in areas of concentrated urban growth where corresponding travel demands can be more readily accommodated. Focusing investment on these facilities would further support development of identified Smart Growth areas.

Section 5.2 further describes the multi-modal transportation program which would be implemented with TREP/PWP improvements to enhance public transit, including the improvement of public transit for Smart Growth areas, and providing for non-automobile circulation. The proposed TREP/PWP multi-modal program focuses on implementing transportation improvements which facilitate various modes of transportation to meet regional needs including rail, bicycle, and pedestrian improvements. Planned improvements to the highway corridor will provide and improve public transit service access to the facility and provide for non-automobile circulation within the corridor. I-5's managed lanes and direct access ramps will provide priority service for buses and other transit vehicles as well as HOVs. Proposed improvements to pedestrian crossings across the rail and highway facilities, and new or improved corridor bike and hiking trails will provide safe, non-automobile dependent routes to and from the coastal zone and to coastal recreation areas.

Denial or modification of the proposed TREP/PWP to fully resolve potential inconsistencies with the Coastal Act would eliminate TREP/PWP improvements which would on balance provide for the greatest protection of coastal resources as is required by Coastal Act Sections 30250 and 30252. Absent the proposed TREP/PWP improvements, existing and future deficiencies in the transportation system will discourage anticipated and planned growth from occurring in the urban corridor and designated Smart Growth areas. Continued degradation in transportation infrastructure, reduced mobility and associated environmental impacts result in a deteriorating quality of life, would encourage development outside the urban area for those seeking improved quality of life in undeveloped and rural areas. In addition, absent the proposed TREP/PWP improvements that would enhance public transit on the rail and highway facility and provide for non-automobile circulation throughout the corridor, coastal resources would continue to degrade, particularly as it relates to maintaining and enhancing mobility in the corridor to provide access to coastal communities, the corridor shoreline and upland recreational resources.

Protection and Enhancement of Public Access and Recreational Resources (Sections 30210, 30211, 30212, 30212.5, 30213, 30223, 30252, and 30254)

The coastal access and recreation policies of the Coastal Act mandate that maximum public access and recreational opportunities in the Coastal Zone be provided for all people, consistent with the need to protect public safety, private property and natural resources. These policies further require that public facilities are to be provided throughout an area so as to mitigate impacts of overcrowding or overuse by the public of any single area, and that low-cost visitor and recreational facilities be protected, encouraged, and where feasible, provided. Further, the Coastal Act requires upland areas necessary to support coastal recreational uses to be reserved for such uses, where feasible.

The TREP/PWP will eliminate existing impediments to coastal access opportunities for residents and visitors and will substantially benefit coastal access and recreation as mandated by Sections 30210, 30211, 30212, 30212.5, 30213, 30223, 30252 and 30254 of the Coastal Act.

As described in Section 5.4, rail improvements will enhance access to the coast by increasing capacity and reliability, reducing travel time, and expanding service areas. Further, as the primary means for the public to reach shoreline access points and 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 TREP/PWP improvements focusing on HOV/managed lanes would give priority to ride-sharing, public transit and SOVs (when capacity allows) while reducing overall congestion, protecting and facilitating public access, and funding transit investments. The proposed TREP/PWP program would ensure that the corridor's large and varying customer base of HOVs, many of which are seeking access to coastal resources, would be provided with fast, reliable travel times.

A fundamental element of the TREP/PWP is that it will improve bicycle and pedestrian routes and trails which would enhance an existing network which provides access to the beaches, lagoons, open spaces, and coastal communities. Existing fragmented routes and trails of the network would be upgraded and completed, eliminating barriers and gaps. New under- and overpasses will connect and improve bicycle and pedestrian routes to the coast. Additionally, routes across lagoons will be similarly integrated into highway improvements. Pedestrian bridges and improved at-grade crossings along the LOSSAN rail corridor will provide new and improved pedestrian and bicycle crossings over the tracks, better connecting inland communities to area beaches.

Denial or modification of the proposed TREP/PWP to fully resolve potential inconsistencies with the Coastal Act would eliminate TREP/PWP improvements which would serve to affirmatively implement the coastal access and recreation policies of the Coastal Act. Denial or modification of the proposed TREP/PWP to fully resolve project inconsistencies would result in continued, adverse impacts to public access and recreational resources which is inconsistent with the access and recreation policies of the Coastal Act. Absent the proposed TREP/PWP improvements, traffic congestion, travel delays, inadequate and infrequent transit facilities and services, and incomplete bike and pedestrian networks would continue to limit the ability for people to access the coast and upland recreational areas.

5.10.2 Coastal Act Consistency Analysis

Balanced against the coastal resource benefits of the TREP/PWP is the competing fact that components of the rail and highway improvements included in the TREP/PWP would affect wetlands, ESHAs, and agricultural resources. However, these impacts need to be evaluated in context as the TREP/PWP will positively affect coastal resources, including wetlands and ESHAs.

The project will minimize impacts to these resources to the extent feasible through proposed project design, including by avoiding the most sensitive resource areas. In addition, site-specific alternatives analyses for both rail and highway corridor improvements will ensure that impacts to wetlands, ESHAs, and agricultural resources are minimized and the least environmentally damaging feasible alternative adopted.

In addition, the TREP/PWP will enhance coastal resources over existing conditions. As discussed above, the TREP/PWP would improve conditions for coastal resources subject to an affirmative mandate by improving public transit and non-motorized transportation alternatives that reduce energy consumption and air emissions, resulting in improved air quality. The TREP/PWP would support Smart Growth, and would implement improvements to the existing transportation system that eliminate existing impediments and enhance coastal access opportunities for residents and visitors. In addition, as detailed in sections 5.4 and 5.5, and summarized below, although TREP/PWP improvements would

result in impacts to wetlands and ESHA, impacts would be minimized and mitigated to the maximum extent feasible. Finally, the project includes a Resource Enhancement Program that will enhance and improve water quality, wetlands and ESHA resources in the corridor as compared to existing conditions.

5.10.2.1 Wetlands

As discussed in Section 5.4, where feasible, the proposed bridge replacement projects (both highway and rail) over the lagoons and other coastal waterbodies will improve hydrology and water quality. The design of these new bridges will better convey flood waters and allow for improved tidal flushing, improving water quality and wetland habitat. The rail improvements will also reduce the vehicle miles travelled on roadways, which will reduce roadway pollution and improve the quality of roadway runoff. Any reduction in vehicle miles traveled with the implementation of the rail Improvements, in conjunction with the proposed highway improvements that would specifically target improving water quality on I-5, would reduce and better treat the pollutant burden in stormwater runoff from area highways. As such, water quality in the corridor is expected to be better after the TREP/PWP improvements than it is now.

TREP/PWP Resource Enhancement Program

The TREP/PWP includes a comprehensive Resource Enhancement Program that will significantly improve water quality and marine resources—beyond what is required to mitigate the project's impacts. The program includes securing no net loss of habitat (including wetlands), habitat preservation, and facilitating comprehensive lagoon planning, restoration, and maintenance programs.

In addition, the TREP/PWP would facilitate the development and implementation of ongoing comprehensive lagoon restoration efforts for help restore San Elijo and Buena Vista Lagoons. These efforts will substantially enhance and restore water quality in the corridor, and also restore, enhance, and protect different habitat types within the respective lagoon ecosystems. While these restoration efforts would not focus on traditional in-kind habitat replacement mitigation ratios, the overall program would restore and enhance an integrated ecosystem providing habitat for fish, birds, and benthic organisms. The program would not only adequately compensate for the loss of marine habitat which would occur from development of the TREP/PWP rail and highway improvements, but it would provide fundamental habitat enhancement and "lift" on a corridor-wide scale not otherwise possible.

Design/Development Strategies

Design and development strategies would ensure that proposed diking, filling, or dredging of existing wetlands would maintain or enhance the functional capacity of the wetland. The total "footprint" of piles or columns which presently support the existing bridges across the corridor's waterbodies would not be increased under the proposed rail improvements plan.

Policies and Implementation Measures

Project-level alternatives will be evaluated to determine whether the amount of fill in lagoons can be reduced. The I-5 highway corridor policies and implementation measures would require that options for coordinating rail and highway infrastructure construction plans in the lagoon areas be evaluated for potential benefits to lagoon systems, and feasibility for rail and highway project implementation. In addition, pursuant to the proposed policies and implementation measures, an evaluation of impacts and benefits of removal of existing earthen fill from lagoon crossing structures, and an evaluation of design options for new structures that reduce the amount of fill required in lagoons would be conducted. Opportunities to improve coastal hydrology/hydraulics in tidal lagoons utilizing specific construction methods or facility designs, including the replacement of existing embankments within the lagoons with a series of bridge structures, will be evaluated at the same time.

5.10.2.2 Environmentally Sensitive Habitat Areas

As described in Section 5.4, the TREP/PWP includes a comprehensive, corridor-wide Resource Enhancement Program to restore ESHA and wetland habitat along the 30-mile NCC coastline. The Resource Enhancement Program will help restore ESHA features lost by previous construction of adjacent development and uses, including existing transportation facilities. In addition, the proposed TREP/PWP Resource Enhancement Program (detailed in Chapter 6, Implementation) would facilitate acquisition and restoration of upland and wetland habitat areas throughout the corridor through expenditure of *TransNet* Environmental Mitigation Program (EMP) funds, and will facilitate major lagoon restoration programs that include improved tidal circulation in the San Elijo and Buena Vista Lagoon systems.

TREP/PWP Resource Enhancement Program

The TREP/PWP includes a comprehensive Resource Enhancement Program which will significantly enhance wetlands and ESHA. The proposed program, wholly funded by the EMP, will create wetland and upland habitat and significantly enhance degraded habitat before the TREP/PWP project is implemented. This will prevent even a temporary loss in the amount of habitat in the corridor. In addition, the program provides for a no net loss of habitat to ensure that the variety and range of coastal habitats in the corridor is not diminished due to the proposed rail and highway improvements. The program also helps preserve the remaining sensitive habitats in the corridor. In addition, the TREP/PWP will facilitate the development and implementation of comprehensive lagoon restoration efforts for San Elijo and Buena Vista Lagoons. These efforts will serve to substantially enhance and restore water quality in the corridor, and will restore, enhance, and protect different habitat types within the lagoon ecosystems. While these restoration efforts would not focus on traditional, in-kind habitat replacement mitigation ratios, the overall program will restore and enhance an integrated ecosystem providing habitat for fish, birds, wildlife and benthic organisms. Restoration efforts would not only compensate for the loss of ESHA that would occur from implementation of the TREP/PWP transportation improvements, but would result in overall enhancement of sensitive habitat areas in the corridor. In other words, the quantity and quality of habitat in the corridor will be greater after the TREP/PWP project is developed than it is now.

Design/Development Strategies

The rail design and development strategies require the proposed railway improvements to be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values. Similarly, development in areas adjacent to ESHAs or parks and recreation areas would be sited and designed to prevent impacts that would significantly degrade those areas, and would ensure compatibility with the continuance of those habitat and recreation areas.

Project-level analysis for potential impacts of rail improvements on ESHAs and special-status species will be conducted and subject to review during subsequent project-specific Federal Consistency Review to assess and identify all potential permanent or temporary impacts to ESHAs and special-status species and appropriate mitigation measures to ensure project consistency with Coastal Act Section 30240.

Mitigation strategies will be applied to all future project-specific rail improvements to avoid or reduce impacts to ESHAs and special-status species, as applicable. Where feasible, Biological Resources Management Plans (BRMP) would be prepared to specify the design and implementation of biological resources mitigation measures (including habitat replacement and revegetation, protection during construction, performance/growth standards, maintenance criteria, and monitoring requirements) to ensure the long-term perpetuation of the existing diversity of habitats in the project area and adjacent

urban interface zones. Additional potential mitigation strategies would address sensitive plant and wildlife species. This may include preconstruction surveys, construction monitoring, relocation of plants or plant propagation, restoration of suitable breeding and foraging habitat, and participation in an existing Habitat Conservation Plan. If wildlife crossings are applicable, the design and development strategies would ensure that the design, shape, and size would be sufficiently attractive to encourage wildlife use.

In accordance with the LOSSAN rail design and development strategies, potential impacts to plant communities would be fully mitigated pursuant to the coastal resource enhancement program detailed in Chapter 6 as it relates to no net loss of habitat, habitat preservation, and comprehensive lagoon restoration program mitigation. To further protect plant communities, specific mitigation measures for weed control may also be implemented, where applicable, to minimize or avoid the spread of weeds during construction and operation.

Policies and Implementation Measures

The proposed I-5 highway corridor policies and implementation measures require I-5 highway improvements, community enhancement projects, and associated development in areas adjacent to ESHAs and parks and recreation areas, to be sited and designed compatible with the continuance of those habitat and recreation areas while preventing impacts that would significantly degrade those areas, and ensuring that ESHAs are protected against any significant disruption of habitat values.

To minimize potential impacts to sensitive communities during construction of highway, community and resource enhancement projects, implementation measures would require native habitats outside the construction limits be designated Environmentally Sensitive Areas (ESA) on project maps and access within those ESAs would be prohibited. Furthermore, cut slopes would be revegetated with native upland habitats with similar composition to those within the project limits and any seeding of native upland habitats would be completed between October and February to ensure the seed has proper conditions for germination. Temporary impact areas would be revegetated and restored to pre-existing conditions to reduce the permanent impact of short-term construction.

Additional measures would be employed during construction to minimize impacts to nesting migratory bird species and migratory birds dependent on lagoons. All native vegetation and non-native shrubs and trees within the impact areas would be removed outside of the breeding season (February 15 to August 31), if possible. Exclusion devices would be installed on bridge drain holes and ledges during the non-breeding season (September 1 through February 15) to stop swallows, swifts, and any other birds or bats from nesting on or within bridges which are scheduled to be removed or reconstructed. To minimize impacts to migratory birds dependent on lagoons for stop over, resting, and foraging habitats along the Pacific flyway, construction would not occur in more than two lagoons at any one time. When necessary, a qualified biologist would thoroughly survey all vegetation prior to removal to ensure there are no nesting birds on-site.

A qualified biologist would also be made available for both the pre-construction and construction phases to review grading plans, to address protection of sensitive biological resources, to monitor ongoing work, and to minimize impacts to threatened and endangered species. Other measures implemented to minimize impacts to threatened and endangered species include maintaining adequate channel width of the San Luis Rey River and lagoons to facilitate fish passage; creating detention basins to treat runoff from the freeway; use of light shielding to protect ESAs; and restricting pile driving activity outside of the breeding season to reduce construction noise impacts.

A biological evaluation of the development area, which includes the proposed development footprint and a surrounding 100-foot buffer area, would be conducted prior to construction of each project to evaluate any changed site conditions which could affect ESHA values and/or impact special-status species protected by this TREP/PWP. In the event ESHAs and/or special-status species not already considered in the TREP/PWP are identified during this process, all ESHA and/or special-status species resource protection measures included in this TREP/PWP would be applied to the newly identified resources, and uses and development would be limited in accordance with that mandated by Section 30240 of the Coastal Act.

5.10.2.3 Agricultural Resources

In addition to maintaining the primary coastal access corridor in the NCC, the proposed highway and rail improvements are critical to goods movement which has a direct affect on the viability of agricultural operations in the region and the state. The majority of agricultural commodities in California are transported from farms to markets via ground transportation. Thus, the ability to transport local agricultural commodities to large markets through vital arteries such as the I-5 is also critical to the preservation and the continued viability of agricultural operations in the NCC and throughout the Coastal Zone. Moreover, close proximity of transportation corridors to agricultural areas reduces costs associated with transporting agricultural commodities, and the reliability of these arteries is necessary to ensure delivery and equitable distribution of commodities and commensurate compensation to producers.

Design/Development Strategies

Proposed rail improvements consist only of double tracking and would occur within the existing rail corridor ROW and, therefore, impacts to the adjacent agricultural lands are not anticipated. For rail improvements, design and development strategies for agricultural resources include the development and implementation of appropriate project- and site-specific mitigation measures for any potential agricultural parcel affected by rail improvements.

Policies and Implementation Measures

For the I-5 highway and community enhancement improvements, policies and implementation measures include: an enhanced pedestrian overpass connection on Bush Street to connect to existing community gardens; payment of an Agricultural Resource Impact Mitigation Fee for impacts to Prime Farmland; return of any affected area to pre-existing agricultural use after project construction is completed; and, submittal of habitat restoration plans for properties supporting existing agricultural uses affected by the project.

5.10.2.4 There are no Feasible Alternatives to Achieve Project Objectives that Avoid a Chapter 3 Coastal Act Policy Conflict

A detailed, design-level alternatives analysis for proposed TREP/PWP rail and highway improvements that impact wetlands, ESHAs, and/or agricultural resources is required to be conducted consistent with the Coastal Act Policy Conflict Resolution process to identify the least environmentally damaging alternative; substantial work has been completed to-date to identify a range of feasible alternatives that meet the corridor's need and vision. Feasible project alternatives for LOSSAN rail improvements potentially impacting wetlands and ESHAs would be determined in project-level analyses and during phased federal consistency review, as applicable. The project alternative analysis for highway improvements potentially impacting wetlands, ESHAs, and agricultural resources is part of the I-5 NCC Project Draft EIR/EIS. A public review period will be conducted and consistent with applicable laws, the selection of a preferred alternative is expected to follow.

5.10.2.5 TREP/PWP Program Alternatives

North Coast Transportation Study

A programmatic analysis of alternatives to address mobility deficiencies and enhance multi-modal access throughout the corridor was completed by SANDAG in December 2000, and was recently revisited as part of the San Diego North Coast Corridor – Corridor System Management Plan (CSMP) process. A goal of the analysis was to identify and recommend a transportation program for implementation in the coastal travel corridor from SR 52 in the northern part of the City of San Diego to the Orange County line. In developing this recommendation, of which the proposed TREP/PWP is based, the North Coast Transportation Study evaluated a range of corridor alternatives. These included elevated sections of the I-5 freeway, carpool lanes, additional railroad stations and facilities, arterial streets and road expansion, and freight improvements. They are briefly summarized below.

Freeway Alternatives. Ten freeway alternatives were evaluated in the corridor. These alternatives expanded I-5 from Del Mar Heights Road to the Orange County line, and I-805 from SR 52 to I-5 in Sorrento Valley. These alternatives would all add capacity to the existing I-5 and I-805 freeways, and would potentially add general purposes lanes, HOV or carpool lanes, managed lanes, and auxiliary lanes in some locations.

In evaluating the alternatives, the study identified costs, environmental constraints, the ability to meet forecast travel demands on the freeways, and potential ROW requirements. In general, the most cost-effective enhancement of the existing freeway facility was the addition of HOV lanes in the median area. The selected alternative, maintaining the freeway within the existing ROW was the only alternative that accommodated demand in a cost-effective manner.

Arterial Streets and Road Expansion. The north coastal area has relatively few north-south arterial streets and roads that parallel the freeway, Pacific Coast Highway being the longest of these arterials. This situation forces even relatively short trips onto the freeway. In order to remove shorter trips from the freeway, this alternative would expand the local street system with improvements calling for the addition of new lanes on existing streets; interchange and intersection improvements; new streets to close gaps in the system, and technological improvements to the signal systems serving major streets. The environmental and community impacts of this alternative raised concerns from widening streets in existing communities and building new roads across dedicated parklands and natural habitat areas. Accordingly, no arterial street improvements or road expansions were recommended for further evaluation.

Commuter Rail Alternatives. These alternatives evaluated a range of potential enhancements to the existing Coaster commuter rail service. Improvements could support significant increases in ridership through more frequent service, higher speed, improved schedule reliability and better access. The analysis of the alternatives concluded that in order to accommodate a significant growth in ridership, double tracking to the fullest extent possible would be required. Additionally, tunneling would be necessary to enable full double-tracking, to remove tracks from unstable bluff areas, and to improve travel times and community access. New commuter station(s) and/or expansion of existing stations, as well as special events stations were also identified.

Other Transit Alternatives. This alternative looked to provide improved transit to the growing El Camino Real corridor neighborhoods which are not directly served by the Coaster commuter rail service. Evaluation of a limited stop, regional bus service along El Camino Real was determined to provide transit service similar in speed and frequency to light rail transit. However, because of surface

street congestion, it would be difficult to provide efficient shuttle services to the Coaster station, as well as safe and reliable passenger access to the shuttles themselves.

Freight Improvements. This alternative addressed whether increased freight traffic through the Port of San Diego, as well as other freight improvements, could reduce freight truck traffic on I-5 and the coastal rail line. It was determined that only a limited potential exists to reduce freight rail traffic or the number of trucks on the freeway through diverting goods movement through the Port as the railway currently excludes movement of containers, and it is unlikely that BNSF would initiate intermodal container movements outside of the Los Angeles Basin. Thus, this alternative was not explored further.

Several potential transportation alternatives were screened from further consideration based on feasibility, perceived community impacts, and cost-effectiveness conclusions of earlier studies, including an elevated monorail or "people-mover" system on the freeway or other existing transportation ROW, light rail or San Diego Trolley-type systems on the El Camino Real corridor, and ferry services for passengers along the coast. Additionally, because it lacked capacity to meet current traffic demands, the consideration of a single, reversible carpool lane on I-5 was screened from further evaluation under the Freeway Alternatives discussion.

San Diego North Coast Corridor CSMP

The CSMP further evaluates the program of alternatives summarized above, against current regional goals. Thirteen multimodal improvement scenarios were evaluated based on their ability to support the seven regional transportation goals in the 2030 Regional Transportation Plan: Pathways for the Future. The following measures were used as the evaluation criteria for the improvement scenarios:

- **Sustainability**
  - Avoids natural resource impacts.
  - Discourages sprawl.
  - Improves air quality and reduces greenhouse gas emissions.
  - Improves water quality and lagoons.
  - Maximizes people throughput.
- **Livability**
  - Limits right-of-way impacts.
  - Connects communities.
  - Reduces noise.
  - Provides coastal access.
- **Mobility**
  - Supports goods movement.
  - Decreases travel times.
  - Provides modal options.
  - Is supported by land use.
- **Efficiency**
  - Manages traffic congestion.
  - Has available resources/ funding.
  - Provides good value (throughput per $).

- **Equity**
  - Serves various demographic groups.
  - Serves various user groups.
- **Accessibility**
  - Encourages high occupancy vehicle (HOV) ridership.
  - Encourages transit ridership.
  - Supports regional network of managed lanes.
- **Reliability**
  - Provides consistency in travel times.
  - Provides travel options.
  - Informs travelers.

Each improvement scenario included a common set of multimodal improvements, upon which a combination of improvements was evaluated to determine support of the regional goals identified above. Those common improvements include: double tracking of rail lines from Oceanside to central San Diego; 20-minute peak period headways for commuter rail services; commuter rail service extended through midday hours; MTS Trolley Mid-Coast extension of service from Old Town to University City; Superloop Bus Rapid Transit (BRT) service from Old Town to University City; enhanced bus service in the El Camino Real corridor; additional Park and Ride facilities; bicycle and pedestrian routes connecting across freeways; and implementation of Transportation Demand Management (TDM) technologies resulting in five percent reduction in traffic. Highway improvements include the Lomas Santa Fe interchange and HOV extension from Via de la Valle to Manchester Avenue.

No Build. This scenario assumes only the comment set of improvements and no additional highway or multimodal improvements, and leaves the I-5 highway corridor in its current configuration consisting of eight general purpose lanes (four each direction), separated by a median with intermittent HOV and auxiliary lanes.

Highway Emphasis. In addition to the comment set of improvements, this scenario relied on additional general-purpose lanes to address forecast travel demand, with variations consisting of adding eight general purpose lanes, or two general purpose lanes. Both scenarios assumed no HOV would be provided.

Mobility Enhanced. The mobility-based scenarios focused on multimodal options such as addition of HOV and managed lanes. The addition of HOV lanes represented the means to encourage carpooling, while managed lanes represented both encouragement of carpooling and creation of flexible resources. All managed lanes scenarios would be compatible with any future, regional BRT.

Transit Emphasis. The transit emphasis scenarios evaluated improvement of the I-5 highway ROW for transit services through addition of BRT lanes and additional transit improvements, or adding elevated monorail or other existing ROW expansion to accommodate passenger rail services.

The evaluation of the general purpose lane, HOV, and transit scenarios emphasize that each have specific attributes that on their own are important and would improve transportation within the corridor; however, without a balanced combination of multimodal improvements, they demonstrate significant limitations to meeting the regional goals to increase sustainability, serve a wide array of people, encourage transit, provide flexibility in the system, and improve how the highway is managed. It was determined that the managed lanes options identified within the mobility enhanced scenario address

some of these limitations while maintaining key attributes. Proposed TREP/PWP improvements would maximize the utilization of existing facilities, move people (not vehicles), provide reliable transportation options, improve coastal access, provide a flexible foundation for further improvements, and would be integrated with land use and activity centers.

The flexibility provided by managed lanes meets the objectives of improving reliability of travel times and maximizing throughput, and accomplishes such while providing an incentive for transit and carpool uses. This flexibility can also be used to accommodate goods movement and the expansion of BRT in the corridor. Thus, the managed lanes alternative(s) were selected for further evaluation within the I-5 NCC Project Draft EIR/EIS.

5.10.2.6 TREP/PWP Design Alternatives

A number of design alternatives have been, and are being considered for TREP/PWP program elements that would result in impacts to wetland, ESHA and agricultural resources. The majority of proposed transportation improvements are either within or adjacent to a major existing transportation corridor (existing railroad or highway corridors). Use of these existing transportation corridors helps minimize potential impacts since they have already imposed a footprint/barrier and, as such, the majority of TREP/PWP facility improvements would not result in substantial impacts to adjacent wetlands, ESHAs or agricultural resources.

The most significant impacts to wetland and ESHA resources would occur where the transportation facilities cross over the corridor lagoons. For example, rail alignment options provide the opportunity to replace the existing bridge across Los Peñasquitos with a causeway structure that would increase the tidal flow and remove the embankment from the lagoons. The I-5 tunnel option, if determined to be the preferred tunnel option through more detailed analysis, could also allow for the removal of the existing Los Peñasquitos rail bridge structures from the lagoon in the future. Further, the TREP/PWP provides a unique opportunity to improve the coastal bluff area in Del Mar by removing the existing rail service from the bluff area and precluding further rail construction along the bluffs, thereby reducing development and maintenance activities on the bluff and shoreline, creating an opportunity to remove existing shoreline protective devices and restore coastal bluff resources. Additional design options to minimize potential impacts of rail facilities to wetlands and ESHA will be considered during project level review.

Along the highway ROW facility encroachments into adjacent areas have been minimized to the extent feasible by construction of retaining walls and minimizing the grading behind the walls. Efforts to minimize fill in corridor lagoons for proposed highway improvements examined using retaining walls; however, the liquefied soils at the lagoons would require very deep footings of over 82 ft and would be prohibitively expensive. Because some level of encroachment into the corridor lagoons is unavoidable, SANDAG/Caltrans have commissioned a San Diego Regional Lagoon Study to document the status and potential restoration opportunities within the corridor's lagoons. The Lagoon Study will include analysis of all aspects of lagoon tidal and freshwater hydrology and affects of potential bridge designs which could improve tidal circulation east of I-5, thus resulting in enhancement of the existing lagoon system through improved water quality, and increased tidal inundation and inter-tidal wetland habitat. In addition to this study, the San Elijo Restoration Project, which is evaluating various factors that may affect tidal circulation including the lagoon inlet and bridges for South Coast Highway 101, rail and highway facilities is currently underway and is, in part, being funded by *TransNet* EMP funds.

The most significant impacts to agricultural resources would occur from construction of direct access ramps (DARs) – direct connections from arterial streets to the Managed lanes without the need for HOVs to cross all lanes of mixed flow traffic from standard on and off-ramps. The DARS are proposed

at Manchester Avenue (City of Encinitas) and Cannon Road (City of Carlsbad). An analysis of proposed DAR locations was conducted throughout the corridor to determine the best location for these facilities to implement improvements to the existing transportation system that enhance overall mobility, and thus enhance coastal access opportunities for residents and visitors utilizing HOV/Managed lane and bus rapid transit modes. The proposed DARs would improve freeway operations, reduce congestion, promote use of alternative modes of transportation, and increase travel time reliability for HOV/Managed lane traffic. Items considered in the analysis for potential DAR locations include:

- Feasibility of Traffic Operations
- Right-of-way/Land Availability
- Proximity to Major Activity/Employment Centers
- Local Support
- Environmental Justice
- Environmental Impacts
- Multimodal Connectivity with Transit (Rail/Bus)
- Park and Ride Potential
- Engineering Feasibility
- HOV Demand
- Improve Coastal Access

The DAR location analysis determined that the proposed DAR at Manchester Avenue would support access to the proposed transit facility and facilitate the future Bus Rapid Transit (BRT) line along El Camino Real from Encinitas to Oceanside. The DAR would also support high HOV utilization on El Camino Real (serving eastern Encinitas) and would improve coastal access. The DAR location analysis determined that the proposed DAR at Cannon Road would improve coastal access and access to other high visitor-serving and recreational land uses (Legoland amusement park, Car Country Carlsbad, Carlsbad Premium Outlets, Flower Fields of Carlsbad, etc.), and that the DAR would reduce delay of traffic on Cannon Road and Palomar Airport Road and could support multimodal connectivity on Palomar Airport Road. Although these improvements would adversely impact agricultural resources, given the limited opportunities to construct DARs for the highway due to other corridor constraints, including natural resources constraints, the TREP/PWP includes the DAR improvements in these locations which are important to achieving the overall mobility benefits for the corridor.

Based on this analysis, the program of rail and highway improvements included in the TREP/PWP has been determined to provide the least environmentally damaging, feasible project alternative to avoid or reduce impacts to coastal resources. The proposed TREP/PWP improvements consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to the existing rail and highway facilities are generally expansions or reconfigurations of existing facilities or, where new rail alignment tunnel options are being considered, would occur primarily below ground. Therefore, by design, the proposed TREP/PWP rail and highway improvements involve limited expansion or encroachment into wetlands, other sensitive habitat areas, or agricultural lands that might otherwise occur if new transportation infrastructure were to be constructed as separate and distinct facilities from the existing rail and highway ROW to address mobility deficiencies and enhance multi-modal access throughout the corridor. Where feasible, additional alternatives analysis for proposed rail and highway improvement elements that have the potential to impact coastal resources will ensure that that all components of the

TREP/PWP would be designed and implemented to minimize and mitigate potential coastal resource impacts to the extent feasible.

5.10.3 Coastal Act Policy Conflict Resolution

As noted previously, the TREP/PWP would permanently fill wetlands, remove ESHAs, and impact prime coastal agricultural lands. This does not appear to render the TREP/PWP inconsistent with Sections 30233, 30241 and 30242 of the Coastal Act because, as described above, the TREP/PWP falls within specific provisions of those sections which expressly allow limited impacts to wetlands, and prime agricultural lands. However, TREP/PWP improvements resulting in impacts to ESHA are potentially inconsistent with Section 30240 and, again, it is possible a different conclusion could be reached regarding TREP/PWP consistency with Sections 30233, 30241 and 30242 of the Coastal Act. Should the TREP/PWP be considered inconsistent with Sections 30233, 30240, 30241 and 30242 of the Coastal Act, denial of the TREP/PWP (no project) or approving a different project would also constitute a significant conflict with the Coastal Act. Adopting the TREP/PWP is the approach that, on balance, is plainly the most protective of significant coastal resources.

The TREP/PWP would, on balance, improve conditions for coastal resources subject to Coastal Act policy mandate by improving public transit and non-motorized transportation alternatives that reduce energy consumption and air emissions. The TREP/PWP would support Smart Growth, implement improvements to the existing transportation system that facilitate multi-modal circulation, eliminate existing impediments to multi-modal circulation, and enhance coastal access opportunities for residents and visitors.

Without the proposed improvements, continued degradation of coastal recreational resources would occur. As with most other significantly populated coastal communities in California, unmet transportation demand results in conflicts between community residents, commuters, and visitors competing for limited capacity on existing transportation systems for various uses. Despite numerous coastal recreational resources and many points of coastal access in the corridor, coastal access would be hindered by disjointed, congested, or limited routes for automobile, bicycle and pedestrian routes and transit service. Therefore, approval of the TREP/PWP is necessary for maintaining and enhancing public access to the coast by 1) extending and improving transit service; 2) reducing transportation congestion, particularly for the variety of coastal users in the corridor; 3) providing adequate public transportation and non-automobile circulation that support access to coastal recreational areas; and 4) providing and/or enhancing recreational facilities. The TREP/PWP improvements would provide for a multi-modal transportation system providing safe and reliable access to and from coastal-dependent industry, and coastal and upland areas in the corridor and entire San Diego region, and would thereby affirmatively implement Coastal Act policies that require maximum protection and, where feasible, enhancement of coastal access and recreation.

Approval of the TREP/PWP would enhance and improve coastal resources over existing conditions. The proposed improvements will enhance multi-modal access throughout the corridor and thereby maintain and enhance, wherever feasible, access to the coast and upland recreation areas. In addition, and beyond enhancements integral to the TREP/PWP, SANDAG and Caltrans propose to more than fully mitigate the adverse impacts the TREP/PWP will have on coastal resources, and would improve and enhance water quality, wetland and ESHA resources above existing conditions with a corridor-wide Resource Enhancement Program.

No alternative exists to fully avoid or reduce impacts to coastal resources. Therefore, the program of proposed TREP/PWP is the least environmentally damaging practicable alternative. The proposed

TREP/PWP improvements consist primarily of improvements to existing transportation facilities located in previously developed and disturbed areas within existing rail and highway ROW. Improvements or changes to the existing rail and highway facilities are generally expansions or reconfigurations of existing facilities or, where new rail alignment tunnel options are being considered, would occur primarily below ground. Therefore, by design and beyond integral enhancement elements, the proposed TREP/PWP rail and highway improvements involve limited expansion or encroachment into wetlands, other sensitive habitat areas, or agricultural lands that might otherwise occur if new transportation infrastructure were to be constructed as separate and distinct facilities from the existing rail and highway ROW to address mobility deficiencies and enhance multi-modal access throughout the corridor.

Accordingly and on balance, approval of the TREP/PWP provides an enhanced and improved coastal recreational corridor. Together with the provision of the proposed TREP/PWP Coastal Resource Enhancement Program, Design/Development Strategies, and Policies and Implementation Measures, approval of the TREP/PWP is more protective of coastal resources than would be denial or modification of the TREP/PWP to eliminate all impacts to wetlands, ESHA and agricultural resources. The identified TREP/PWP Resource Enhancement Program, Design/Development Strategies, and Policies and Implementation Measures are necessary to ensure that adverse impacts to coastal resources are avoided, minimized or mitigated to the extent feasible; and they ensure the benefits of the TREP/PWP for coastal resource enhancement are fully realized. Therefore, approval of the TREP/PWP is most protective of coastal resources for purposes of the conflict resolution provisions of Coastal Act Section 30007.5.

Even if it was concluded that denial of the TREP/PWP would not directly conflict with Coastal Act policies and the TREP/PWP was found to be inconsistent with Sections 30233, 30240, 30241 and 30242 of the Coastal Act, the TREP/PWP may be found consistent with the Coastal Act and should be approved as directed by Section 30001.5. Coastal Act Section 30605 states that PWPs are processed in the same manner as local coastal programs. Local coastal programs, in turn, must comply with Chapter 3 policies "only to the extent necessary to achieve the basic state goals specified in Section 30001.5" (Section 30512.2). Section 30001.5 contains the following policies:

> (a) Protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources.
>
> (b) Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state.
>
> (c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.
>
> (d) Assure priority for coastal-dependent and coastal-related development over other development on the coast.
>
> (e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

Even if the TREP/PWP were considered inconsistent with Sections 30233, 30240, 30241 and 30242 of the Coastal Act, it complies with the Chapter 3 policies to the extent necessary to meet these basic goals of Section 30001.5. As discussed above, the TREP/PWP protects, maintains, enhances and restores the overall quality of the coastal zone environment and its natural and artificial resources.

Though the project will affect wetlands, ESHA, and prime farmland, the Resource Enhancement Program ensures that the overall coastal zone environment—both its natural and artificial resources—will be better with the project than without it. The TREP/PWP also assures orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state. Improving the corridor and the I-5 will enable goods and people to move efficiently, which will promote commerce and travel for social and educational purposes. The project will also maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles. The corridor is becoming overburdened, which is limiting people's ability to get to beaches and other recreational activities. This project will remedy that, and enable more people to enjoy the coast with greater ease. The project also assures priority for coastal-dependent and coastal-related development over other development on the coast by promoting smart growth. Finally, the project includes local initiatives in which SANDAG and Caltrans will cooperate with local jurisdictions in preparing procedures to implement coordinated planning and development for mutually beneficial uses.

6.0 IMPLEMENTATION

6.1 INTRODUCTION

This chapter provides the TREP/PWP Implementation Framework which coordinates the timing of rail, highway, and community and resource-enhancement project components to ensure highway improvements do not outpace other multimodal transportation improvements for the corridor, and that proposed transportation improvements do not outpace natural-resources restoration and enhancement.

The Implementation Framework includes a Preliminary Phasing Plan (Section 6.2.1) for proposed TREP/PWP improvements to ensure transportation improvements would be implemented to achieve a multimodal solution for regional transportation needs, and to ensure transportation improvements are implemented in conjunction with comprehensive restoration and enhancement plans for the region's unique natural resources. In addition, the Implementation Framework includes a Resource Enhancement Program (Section 6.2.2) which utilizes a combination of traditional and non-traditional measures to mitigate coastal resource impacts of the proposed mobility improvements, particularly as it relates to enhancing marine and environmentally sensitive habitat area (ESHA) resources. The constrained, primarily developed NCC leaves few opportunities for large-scale land purchases for restoration opportunities that could enhance the corridor's natural resources, and the NCC's lagoon habitats are biologically unique and cannot be replicated elsewhere; thus, opportunities to enhance these habitats require comprehensive solutions with improvements focused on ecosystem-wide benefits. The TREP/PWP's innovative approach to mitigate impacts to natural resources from road development in advance results in greater benefits to coastal resources on a corridor-wide level than if only ratio-based, project and site-specific mitigation were employed.

This chapter also describes the procedures the Coastal Commission will use to review and authorize development included in the TREP/PWP. As detailed in Chapter 1, the LOSSAN rail projects that improve the movement of freight fall under the exclusive jurisdiction of the Surface Transportation Board (STB) and are therefore not subject to coastal development permit or public works plan requirements. Further, as project-level analysis for proposed rail improvements will not occur until project alternatives are chosen, and preliminary design, engineering, and resource impact analyses have been completed, project implementation and applicable Coastal Act development controls will be evaluated by the Lead Agency for project-specific rail proposals pursuant to future environmental and phased federal consistency review, as applicable. As such, the TREP/PWP is not the standard of review for the LOSSAN rail improvements that improve the movement of freight as identified in Chapter 4 and Section 6.3, and the PWP policies and implementation measures included in this chapter do not apply to the proposed rail corridor improvements. However, the TREP/PWP Implementation Framework detailed in this chapter may provide non-binding guidance in evaluating rail corridor improvements included in the TREP/PWP as those specific projects may be subject to future phased federal consistency review as detailed in Section 6.4 (Federal Consistency Review Procedures). All other improvements included in the TREP/PWP must be found consistent with the TREP/PWP and all policies and implementation measures contained in Chapter 5, and are subject to the PWP procedures detailed in Section 6.5 (PWP Development Review Procedures).

Together with the development policies and implementation measures in Chapter 5, the phasing requirements of Chapter 6 will ensure the TREP/PWP program of improvements is implemented consistent with applicable Coastal Act policies that address:

- Energy Conservation & Vehicle Miles Traveled
- Public Transit & Smart Growth

- Public Access & Recreation
- Marine Resources: Water Quality & Wetlands
- Environmentally Sensitive Habitat Areas & Special Status Species
- Archaeological & Paleontological Resources
- Visual Resources
- Site Stability & Management
- Agricultural Resources
- Conflict Resolution

6.2 IMPLEMENTATION FRAMEWORK

6.2.1 Phased Project Implementation

The TREP/PWP Preliminary Phasing Plan includes Initial-Term, Mid-Term, and Long-Term project phasing groups for proposed rail, highway, community and resource enhancement projects (Table 6-1 and Figure 6-1, Figure 6-2, and Figure 6-3). The Preliminary Phasing Plan is intended to maintain maximum flexibility within the overall TREP/PWP Implementation Framework while providing a clear understanding of the scope, correlation (location, affected resources, interdependence), and preliminary timeframe for implementing proposed rail, highway, community and resource enhancement projects. The primary objectives of the Preliminary Phasing Plan are as follows:

1. **Ensure Multi-Modal Project Phasing:** Identify project phasing and implementation priorities as guidance for rail improvements, and track the progress of rail corridor project implementation in the context of all other TREP/PWP improvements (highway, community and resource enhancement project implementation) which are subject to the PWP and NOID procedures set forth in this chapter.

   The Preliminary Phasing Plan includes LOSSAN rail projects listed and grouped into Initial-, Mid-, and Long-Term projects and Unconstrained Vision projects according to the *San Diego – LOSSAN Corridor Project Prioritization Analysis* (July 2009). The Implementation Framework ensures the TREP/PWP transportation improvements are implemented consistent with the region's commitment to pursue a multimodal solution for regional transportation needs.

2. **Provide Flexibility for Project Implementation:** Provide for maximum flexibility in implementing all TREP/PWP improvements to accommodate opportunities and uncertainties in potential future funding availability and local, state, and federal political and policy decisions, while ensuring projects are implemented in a way that balances rail and highway improvements, and that community and resource enhancements are implemented prior to, or concurrent with, project implementation.

   Provide for maximum flexibility in implementing resource enhancement projects pursuant to the Resource Enhancement Program (Section 6.2.2), while ensuring compliance with mitigation requirements for transportation projects and comprehensive enhancement of corridor resources.

TABLE 6-1: PRELIMINARY PHASING PLAN

Phase	Project Phase Benefits	Highway Improvements	LOSSAN Improvements*	Community Enhancements	Resource Enhancements*	Cumulative Impacts
Initial-Term	**Environmental** • Preserve, create and restore prime habitat • Enable progress towards restoration of San Elijo lagoon **Transit** • Convert nearly 6 miles of the LOSSAN corridor from single to double track improving reliability, decreasing congestion, and allowing for service vision to be implemented: 26 Amtrak, 30 COASTER, 16 Metrolink and 5-7 BNSF trains per day. • Provide 12.5 miles of HOV lanes, extending current facilities and reducing congestion while prioritizing HOVs and transit • Provide 10 miles of managed lanes, providing more direct access for HOVs and transit to coastal resources; reducing overall congestion and increasing priority for and incentivizing HOVs through the introduction of managed lanes **Bicycle, Pedestrian and Coastal Access** • Close 6 major gaps (with trails, pedestrian crossings, tunnels or bridges) in the NCC pedestrian and bike network enabling access to coastal resources	• 2 HOV lanes & noise barriers - Manchester to La Costa • 2 HOV lanes & noise barriers -La Costa to SR-78 • 2 ML from La Jolla Village Dr to SR 56, includes Voigt DAR & I-5 /I-805 HOV HOV Connector • 2 ML from SR 56 to Manchester, includes Manchester DAR & San Elijo Lagoon bridge replacement • Genesee SB Operational Improvements	• 1 - CP San Onofre to CP Pulgas Double Track ** • 5a - Oceanside Coaster Stub Track • 5c - Oceanside Metrolink Stub Track • 8 - Carlsbad (CP Carl to CP Farr) Double Track • 22a - Sorrento Valley Double Track • 23 - Sorrento to Miramar Phase I • 28 - Tecolote Crossover ** • 32 - Airport Intermodal Transportation Center (ITC)** • 35 - Poinsettia Station Run-Thru Track	• 3 Encinitas grade separated pedestrian crossings • Advanced construction of sound walls for 500 units • Hall Property Park Trail Connecting to Santa Fe Drive • Trail Connecting Santa Fe Drive to Requeza Street with Wetland Revegetation • Trail Connecting Requeza Street to Encinitas Boulevard • Carmel Valley Bicycle/Pedestrian Trail Connection • Next Generation Concrete Paving Pilot	• Hallmark- Wetlands: 4.2 ac creation, 1.5 acres preservation; Upland: 10.8 ac preservation • Dean- Upland: 21.6 ac creation, 1.5 ac preservation • San Dieguito River Valley- Wetlands: 50 ac creation; Upland: 57 ac creation • Pardee Carmel Valley- Wetlands: 11.5 ac creation; Upland: 10.7 ac creation, 5.7 ac restoration • La Costa- Upland: 20.5ac preservation • Lazar- Upland: 3.6 ac preservation • San Elijo Lagoon restoration planning, permitting and potential restoration • Buena Vista Lagoon restoration planning, permitting and potential restoration • Lagoon Restoration Endowments • Additional property acquisition, restoration, and monitoring •Hydrologic improvements to lagoons	• 13.5-17.5 acres wetlands • 51.5-62.5 acres sensitive upland habitat impacts
Mid-Term	**Environmental** • Preserve, create and restore prime habitat • Enable continued progress towards restoration of Los Penasquitos, San Elijo, and/or Buena Vista Lagoons **Transit** • Convert 1.9 miles of the LOSSAN corridor from single to double track improving reliability, decreasing congestion, and allowing for service vision to be implemented: 32 Amtrak, 36 COASTER, 16 Metrolink and 9 BNSF trains per day. • Increase LOSSAN capacity by addressing station parking constraints • Provide 10.5 miles of managed lanes, extending the managed lanes facility to almost the length of the corridor and providing more direct access for HOVs and transit to coastal resources; reducing overall congestion and increasing priority for and incentivizing HOVs through the introduction of managed lanes • Enhance park-and-ride facilities to encourage HOV and vanpool travel in the corridor **Bicycle, Pedestrian and Coastal Access** • Close or significantly improve 6 major gaps (with trails, pedestrian crossings, tunnels or bridges) in the NCC pedestrian and bike network enabling access to coastal resources • Introduce additional recreational and coastal access facilities in the corridor	• 2 ML from Manchester to Agua Hedionda Lagoon, includes Cannon DAR and Batiquitos and Agua Hedionda Bridge replacements • Ramp Meter Interconnect ITS Improvements • Palomar Airport Ops Improvements (Aux Lanes) • I-5/SR56 Interchange Improvements (Pending)	• 3 - CP Eastbrook to CP Shell Double Track • 6 - Carlsbad Village Double Track • 12 - Encinitas Pedestrian Crossings • 13 - Encinitas Station Parking • 15 - CP Cardiff to CP Craven - San Elijo Lagoon Double Track • 16 - Solana Beach Station Parking • 27 - CP Elvira to CP Morena Double Track ** • 33 - Santa Fe Depot Station Parking **	• Peñasquitos Creek Trail Connection • Enhanced Park and Ride at Carmel Valley Road • Pedestrian Overpass North of Del Mar Heights Road • Streetscape Enhancements on Ida Avenue • Trailhead at Solana Hills Drive with interpretive outlook over San Elijo Lagoon • Manchester Avenue Pedestrian Bridge and Trail • Villa Cardiff Drive Improvements • McKinnon Avenue Pedestrian Crossing, • Union Street Pedestrian Overpass and Trail Connection with Wetland Revegetation • Park and Ride Enhancement at La Costa Avenue • Trail on East Side of I-5 at Batiquitos Lagoon		• 24.5-29 acres wetlands • 16-31 acres sensitive upland habitat impacts
Long-Term	**Environmental** • Preserve, create and restore prime habitat • Enable progress towards restoration of San Elijo and/or Buena Vista lagoons **Transit** • Convert 7.6 miles of the LOSSAN corridor from single to double track improving reliability, decreasing congestion, and allowing for service vision to be implemented: 36 Amtrak, 54 COASTER, 20 Metrolink and 9 BNSF trains per day. • Increase LOSSAN capacity by addressing station parking constraints • Provide 5.5 miles of managed lanes, completing the managed lanes network in the corridor, reducing overall congestion, and prioritizing and incentivizing HOV and transit use **Bicycle, Pedestrian and Coastal Access** • Close or significantly improve 8 major gaps (with trails, pedestrian crossings, tunnels or bridges) in the NCC pedestrian and bike network enabling access to coastal resources • At least 3 pocket parks or other recreational and coastal access facilities	• 2 ML from Agua Hedionda Lagoon to SR 78 • 4 ML from SR 78 to Harbor Drive, includes Oceanside Blvd DAR and Buena Vista Lagoon Bridge replacement • Construct Braided Ramps from Genesse to Sorrento Valley • I-5/SR78 Interchange Improvements (Pending)	• 5b - Oceanside Station Parking • 7 - Carlsbad Village Station Parking • 9 - Carlsbad Poinsettia Station Parking • 10 - CP Ponto to CP Moonlight Double Track • 14 - CP Moonlight to CP Swami Double Track • 17 - San Dieguito Bridge/Double Track • 18 - Del Mar Fairgrounds Platform • 24 - Sorrento to Miramar Phase II • 29 - CP Tecolote to CP Friar **	• Trail on West Side of I-5 at Agua Hedionda Lagoon • Trail on East Side of I-5 at Agua Hedionda Lagoon • Agua Hedionda Lagoon Pedestrian Bridge Undercrossing • Streetscape Enhancements on Chestnut Avenue • Pocket Park and Access at California Street • Oceanside Boulevard Pedestrian Streetscape Enhancement • Enhancements to Division Street Overpass • Enhanced Pedestrian Overpass Connection on Mission Avenue • Enhanced Pedestrian Overpass Connection on Bush Street • Community Open Space Park • Parking/Staging Area for recreation at SR-76 • Pedestrian Underpass Improvements at San Luis Rey River • Regional Gateway Feature at Harbor Drive		• 13-17 acres wetlands • 25.5-30 acres sensitive upland habitat impacts
Vision			• 11 - Leucadia Blvd Grade Separation • 19 Del Mar Bluffs Stabilization Phase 3 • 20/21 - Del Mar Tunnel -Camino Del Mar / Penasquitos Double Track Option -I-5 / Penasquitos Option • 22b - Penasquitos Double Track • 25/26 - UTC Tunnel -UTC Alignment Option -I-5 Alignment Option • 30 - Taylor Street Grade Separation** • 31 - Downtown Trench and Grade Separations**			

Key
* LOSSAN Improvements and Environmental Enhancements reflect a "pooled" approach. Although LOSSAN projects are prioritized by potential to improve service, implementation order is flexible to changing priorities or funding opportunities.
** Projects not included in the NCC TREP/PWP which illustrate regional investment and improved operations in the rail corridor.
Sources:
LOSSAN Projects: 1. San Diego - LOSSAN Corridor Project Prioritization Analysis, July 2009 2. San Diego North Coast Corridor - Corridor System Management Plan, July 2010. 3. LOSSAN Final Program, September 2007.
I-5 Projects: 1. I-5 NCC Project Draft EIR/EIS, June 2010.
Community Enhancements: 1. I-5 NCC Project Draft EIR/EIS, June 2010. Assumption: Phasing of community enhancements would geographically reflect phasing of highway improvements.
Resource Enhancements: 1. NCC Mitigation Sites, SANDAG and Caltrans.

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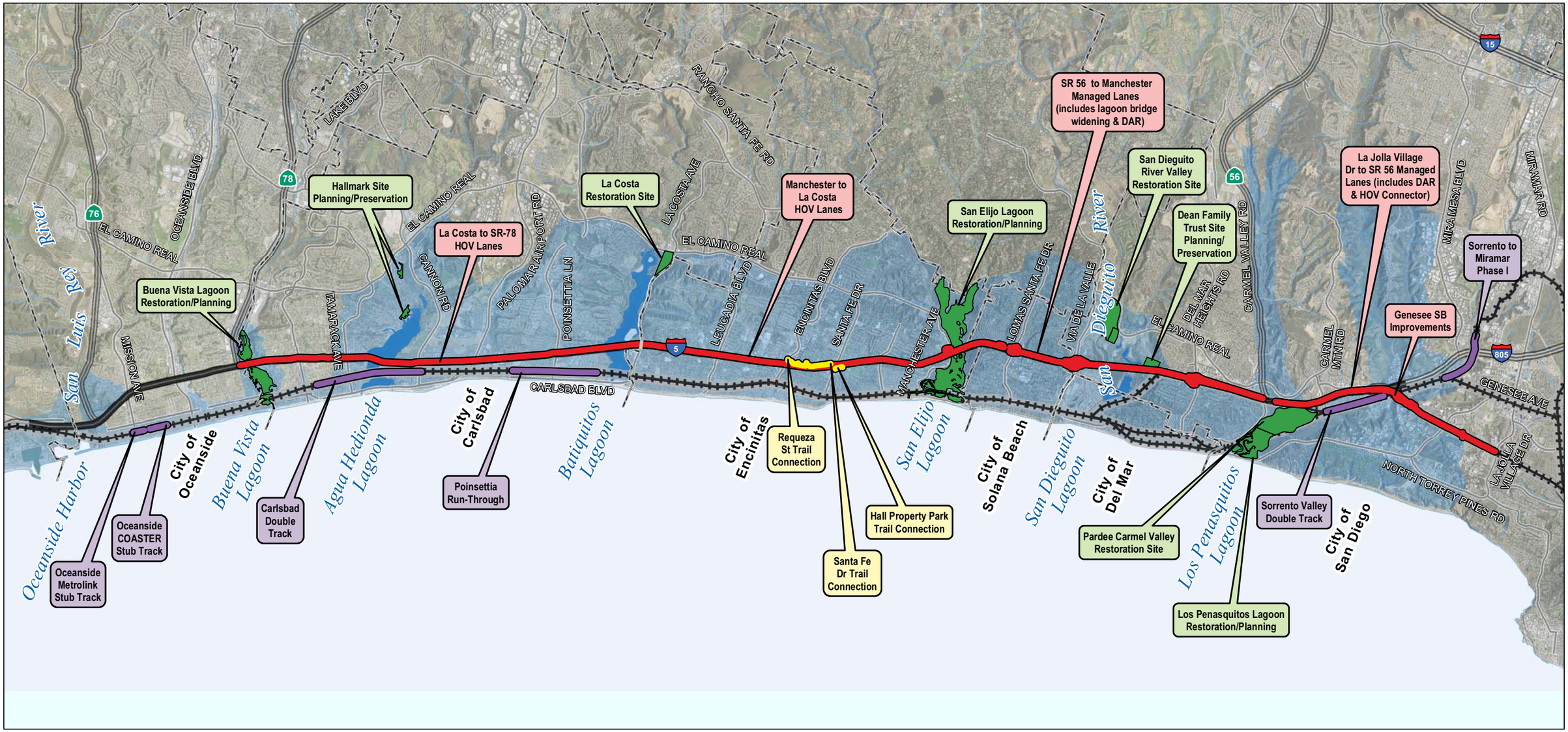

NORTH

0 1 2 4 Miles

NOTE: The Resource Enhancement Program utilizes a pooled approach to creation, restoration, and preservation opportunites for wetland and ESHA resources throughout the corridor.

- City Boundary
- Coastal Zone
- Lagoon
- Interstate
- State Route
- Major Arterial
- I-5 NCC Project Area
- LOSSAN Project Area

Project Type

- Highway Improvement
- Rail Improvement
- Community Enhancement
- Environmental Enhancement

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

FIGURE 6-1

Project Improvements and Enhancements (Initial-Term Phase)

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

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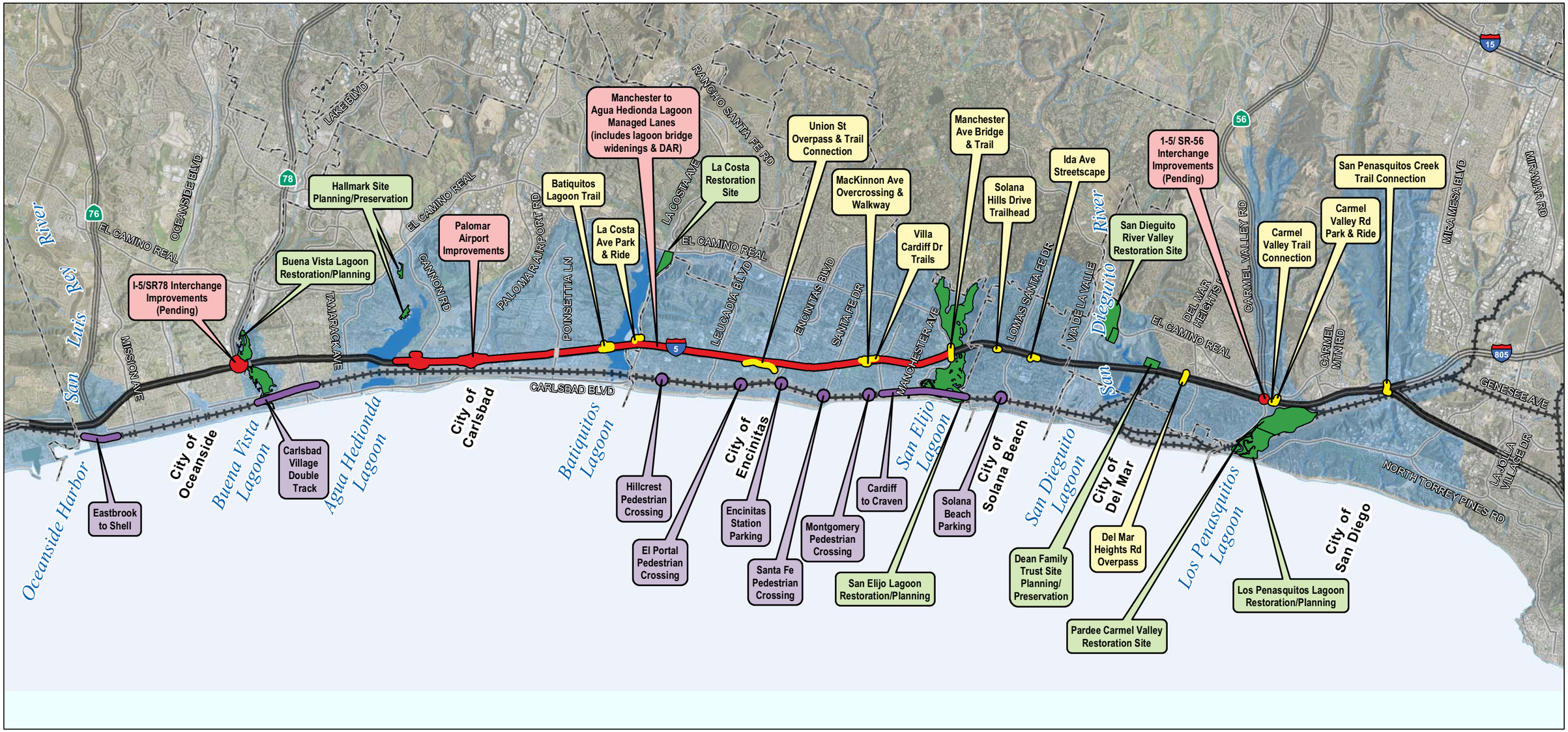

NORTH

0 1 2 4 Miles

NOTE: The Resource Enhancement Program utilizes a pooled approach to creation, restoration, and preservation opportunites for wetland and ESHA resources throughout the corridor.

City Boundary
Coastal Zone
Lagoon

Interstate
State Route
Major Arterial
I-5 NCC Project Area
LOSSAN Project Area

Project Type

Highway Improvement
Rail Improvement
Community Enhancement
Environmental Enhancement

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

FIGURE 6-2

Project Improvements and Enhancements (Mid-Term Phase)

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

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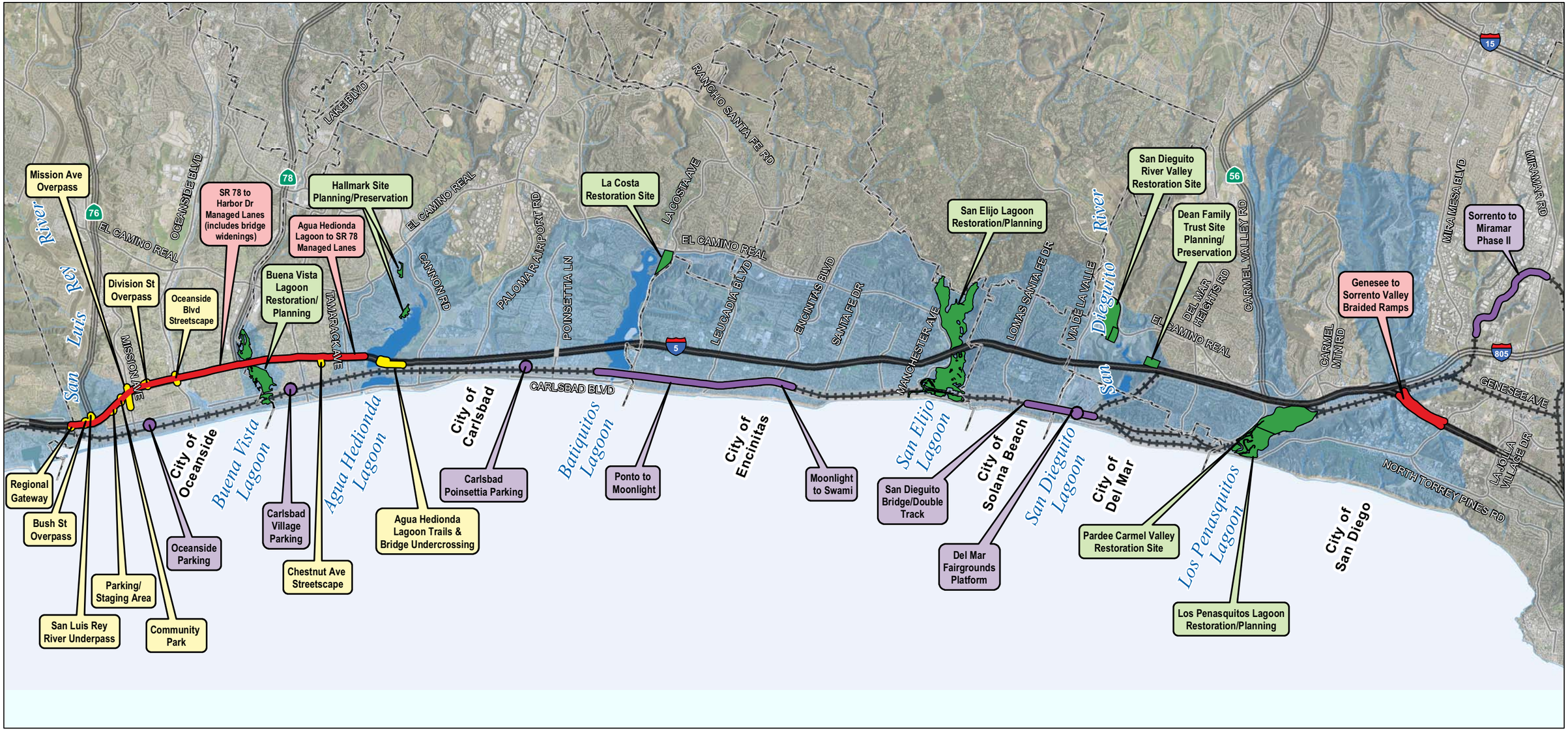

NORTH

0 1 2 4 Miles

NOTE: The Resource Enhancement Program utilizes a pooled approach to creation, restoration, and preservation opportunites for wetland and ESHA resources throughout the corridor.

- City Boundary
- Coastal Zone
- Lagoon
- Interstate
- State Route
- Major Arterial
- I-5 NCC Project Area
- LOSSAN Project Area

Project Type

- Highway Improvement
- Rail Improvement
- Community Enhancement
- Environmental Enhancement

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

FIGURE 6-3

Project Improvements and Enhancements (Long-Term Phase)

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

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3. **Ensure Potential Resource Impacts & Benefits are Balanced:** Identify, quantify, and track, where feasible, coastal resource opportunities/benefits and impacts of each Initial-Term, Mid-Term, and Long-Term project phase. Integral coastal resource opportunities and benefits include:
    - Promotion of public transit and smart growth (energy conservation and air quality)
    - Improvements to public access and recreation
    - Protection/enhancement of water quality
    - Restoration, enhancement and/or preservation of wetlands
    - Restoration, enhancement and/or preservation of environmentally sensitive habitat areas.

6.2.1.1 Process for Phased Implementation

This section identifies SANDAG/Caltrans phasing obligations for individual project components included in the TREP/PWP. The phasing plan combines rail, highway and community enhancement projects into project phases. The combination of projects in each phase has been designed to ensure that development of multi-modal transportation options keeps pace with highway improvements. The phasing plan also maintains an open pool of resource enhancement opportunities which can be drawn from and implemented prior to, or concurrent with, transportation project implementation to ensure impacts to natural resources are mitigated before or concurrent with construction of project elements causing such impacts. The specific phasing requirements are as follows:

1. **Ensure Multi-Modal Project Phasing:** SANDAG and Caltrans must complete all project phases for highway and associated community enhancement projects in order—i.e., they must start with Initial-Term projects, move to Mid-Term projects and then on to Long-Term projects, except where highway and associated community enhancement project "shifts" between phases are allowed per the following section.

    Individual rail, highway, community and resource enhancement projects within an active project phase must be "complete" before SANDAG and Caltrans begin constructing highway projects in the next project phase.

    A project phase will be considered "complete" with a NOID submittal demonstrating that construction of all rail, highway, and community enhancement projects included in the phase has been initiated and any corresponding mitigation/enhancement requirements implemented pursuant to the Resource Enhancement Program (Section 6.2.2).
2. **Provide Flexibility for Project Implementation:** SANDAG and Caltrans retain sole discretion to determine what order to construct projects within a given phase. Some projects within an active project phase may be completed before others in the same phase start. Other projects in the same phase may be carried out in parallel.

    SANDAG and Caltrans may "shift" individual highway and associated community enhancement projects from one phase to another by demonstrating in the corresponding NOID submittal that the total mobility and coastal resource benefits (coastal access, resource restoration/enhancement, etc.) of the phase the project is entering exceed the cumulative impacts of that phase. Cumulative phase benefits and impacts will continue to be documented and updated within the phasing plan per the process outlined in the following section.

    SANDAG and Caltrans will maintain an open pool of resource enhancement opportunities which can be drawn from and implemented prior to, or concurrent with, transportation project

implementation. The phasing plan includes a pool of both known and potential resource restoration and enhancement opportunities in the NCC. SANDAG and Caltrans will develop a process as part of the Implementation Framework that allows the region to prioritize and implement the projects prior to, or concurrent with, transportation project implementation such that transportation project impacts are adequately mitigated and regionally significant enhancement projects implemented to achieve the region's restoration and enhancement goals for the corridor's natural resources.

3. **Ensure Potential Resource Impacts & Benefits are Balanced:** SANDAG and Caltrans must keep track of the status, project phase benefits and/or impacts covered by this TREP/PWP or that are part of the Resource Enhancement Program.

   The Preliminary Phasing Plan identifies and quantifies, where feasible, the mobility and coastal resource opportunities/benefits and impacts of each project phase. Pursuant to Section 6.5 (PWP Development Review Procedures), NOID submittals for individual projects within an active phase must include a discussion of the status of implementation of rail, highway, community and resource enhancement projects included in the same project phase. Cumulative phase benefits and impacts will continue to be documented and updated per NOID submittals, which will provide a reporting mechanism for progress made toward achieving TREP/PWP implementation objectives and current data regarding project phase benefits and impacts from which to determine:

   - That a project phase is "complete" for purposes of initiating the next project phase for highway and associated community enhancement projects
   - A proposed development's contribution to the cumulative mobility benefits of the project phase (public transit, bicycle, pedestrian, coastal access/recreation improvements)
   - A proposed development's contribution to cumulative project phase resource impacts, project phase mitigation requirements, and status of compliance with mitigation/enhancement requirements (as established and accounted for per the Resource Enhancement Program, Section 6.2.2)
   - A proposed development's contribution to cumulative project phase resource benefits (water quality, wetlands, environmentally sensitive habitat areas), overall progress of restoration and enhancement improvements in the corridor and success of achieving the goals of the Resource Enhancement Program (Section 6.2.2), which may have project components and/or procedures not subject to PWP/NOID procedures (i.e. large-scale restoration and monitoring plans for San Elijo and Buena Vista Lagoons).
   - The appropriateness of potential project shifts between phases

6.2.2 Resource Enhancement Program

The *TransNet* Extension Ordinance approved by the San Diego voters in November 2004 established an Environmental Mitigation Program (EMP) for the advance mitigation of resource impacts associated with regional and local transportation projects. The Resource Enhancement Program provides a framework for expenditure of EMP funds on advanced and comprehensive resource enhancement activities as part of the TREP/PWP implementation plan, providing an opportunity to pre-mitigate on a corridor-wide level potential TREP/PWP project impacts to coastal resources. The Resource Enhancement Program provides for expenditure of EMP funds on resource enhancement activities which focus on advanced habitat creation, restoration, enhancement, and improving the ecological health of sensitive habitats and coastal wetlands in the TREP/PWP corridor.

It is recognized that new opportunities for various types of resource enhancements may become available in the corridor after adoption of the TREP/PWP due to factors such as additional funding availability, completed habitat restoration plans, or land acquisition options. In addition, some enhancement opportunities which would promote large-scale ecological enhancement to resources may be considered more critical for the region, while others which would contribute to enhancing a smaller area within the corridor may be considered less critical for achieving regional goals for resource enhancement. The enhancement of natural resources in the NCC requires a unique, comprehensive approach to resource enhancement with input from multiple regulatory agencies and stakeholders. These factors make it necessary to maintain flexibility when prioritizing and phasing resource enhancement projects as advanced or concurrent mitigation for potential transportation project impacts, as well as projects which are not mitigation but instead inherently enhance resources as a result of project implementation.

The Resource Enhancement Program would provide a consistent, comprehensive, and proactive planning and management process to address project-specific impacts and regional, cumulative resource impacts throughout the corridor. The result of project implementation through the TREP/PWP would be a coordinated and comprehensive program for mitigation which exceeds traditional and often-fragmented project-specific mitigation benefits by strategically acquiring restoration opportunities and preserving ESHAs in conjunction with facilitating comprehensive restoration plans for the region's most significant coastal resources. New and improved transitional habitat and buffer areas, restored riparian corridors, preservation and/or restoration of habitat areas via the purchase of land areas adjacent to corridor lagoons, and comprehensive lagoon restoration would help address water quality and habitat needs of special-status and wildlife species, and would help achieve the overall goal of enhancing biodiversity and habitat value in the corridor.

The structure of the resource enhancement element of the TREP/PWP Implementation Framework allows the region to prioritize and maximize resource enhancement activities on a corridor-wide level based on these evolving factors. This structure also allows the region to supplement the pool where new resource enhancement opportunities arise, which could be authorized pursuant to future project-specific phased federal consistency review or NOIDs for PWP projects, as applicable. However, where the TREP/PWP resource enhancement opportunities package will include elements to support and facilitate comprehensive lagoon restoration, maintenance, and planning programs, implementation of large-scale restoration plans for the corridor's lagoons would be subject to separate coastal development permitting beyond the scope of the TREP/PWP.

The Draft TREP/PWP identifies the goals of the Resource Enhancement Program and the criteria for identifying and prioritizing current and future resource-enhancement opportunities. It also provides an outline for a process to develop the resource enhancement package with an accounting system of the type, amount and phasing for enhancement activities. The final TREP/PWP, once vetted with the regulatory agencies and stakeholders during public review of the Draft TREP/PWP, is envisioned to contain a flexible list of prioritized opportunities, a well-defined process for prioritizing known and potential future opportunities, and a description of agency/stakeholder roles in the process.

6.2.2.1 Goals and Criteria for Resource Enhancement Program

Goal: The goal of the Resource Enhancement Program is to identify a package of natural resource enhancement opportunities in the NCC which promotes a large-scale, systems-approach to resource enhancement to maximize the benefit to the region. Funding for resource enhancements would be directed to those enhancements identified as addressing the most critical ecological needs in the NCC

while respecting the phasing of mitigation needs identified in the TREP/PWP and the voter-adopted *TransNet* Expenditure Plan's EMP budget for the NCC. The resource enhancement opportunities package is intended to be flexible enough to adapt to future changes in opportunities, while promoting early enhancement of natural resources. Early enhancement would also serve to reduce required mitigation for TREP/PWP mobility projects by eliminating impacts associated with temporal loss of wetland and sensitive upland habitat functions and value.

Criteria: The following criteria would be used to help prioritize opportunities in the NCC (in no particular order).

- Opportunities that promote enhancement within the NCC.
- Opportunities that promote the no-net loss of habitat.
- Opportunities that are "shovel ready" for enhancement.
- Opportunities that satisfy mitigation for mobility projects.
- Opportunities with strong community support.
- Opportunities that provide significant system-wide ecological improvements within the watersheds of to the NCC.
- Opportunities with high ecological benefit for a given expenditure of funding resources.
- Opportunities with high degree of sustainability for long-term maintenance and management.
- Opportunities that provide a unique value which would not likely be available or would be more costly in the future (e.g., a lost opportunity).

6.2.2.2 Resource Enhancement Opportunities Package Development Outline

Specific resource enhancement opportunities will be identified and prioritized with resource agencies and stakeholders prior to final TREP/PWP approval. The resource enhancement package will be developed to meet the identified Resource Enhancement Program goals and resource enhancement projects will be prioritized using the criteria in Section 6.2.2.1.

The resource enhancement opportunities package will consist of resource enhancements appropriate for transportation-project impact mitigation and which will meet the permitting requirements of the regulatory agencies, and those which will inherently enhance significant resources beyond project mitigation requirements as a result of TREP/PWP implementation.

An accounting system of the type, amount and phasing of the resource enhancements will be developed prior to final TREP/PWP approval. The accounting of resource enhancements will be tracked and reported pursuant to Section 6.5.2 (NOID submittals for individual project proposals) and compared to the resulting benefits, impacts and mitigation of each project phase as identified in the TREP/PWP Preliminary Phasing Plan. A more specific accounting system of the type, amount and phasing of the resource enhancements will be developed prior to final TREP/PWP approval.

6.2.2.3 Advanced Coastal Resource Enhancement, Mitigation and Phasing Outline

Advanced Coastal Resource Enhancement Activities. The *TransNet* EMP provides funding to implement coastal resource enhancement projects before transportation projects are implemented with concurrence by the Coastal Commission, resource agencies and stakeholders through the TREP/PWP review process and, subsequently, pursuant to Section 6.5.2 (NOID submittals for individual project proposals). As property acquisitions or other on- and off-site resource enhancement opportunities are secured for habitat creation, restoration, or preservation, the Resource Enhancement Program

provides that habitat enhancement may precede transportation project implementation as identified in the TREP/PWP. Advanced resource enhancement activities would provide mitigation credits, which would be established and accounted for as part of the development process for the resource enhancement package (Section 6.2.2.2), to compensate for resource impacts associated with implementing transportation projects as identified in the TREP/PWP.

Mitigation and Phasing. Advanced resource enhancement activities would be assigned mitigation credits based on in-kind habitat creation, restoration and/or preservation; and/or for activities facilitating and achieving ecological lift of corridor lagoons. Mitigation credit would be assigned to resource enhancement activities based on the habitat type and amount of area enhanced/preserved, which will then be available as mitigation credit to compensate for habitat impacts associated with implementation of projects included in the TREP/PWP. Mitigation credits could also be established and available to compensate for habitat impacts associated with implementation of projects included in the TREP/PWP pursuant to the Corridor Lagoon Planning, Restoration, and Maintenance efforts, described in Section 6.2.2.4.

Pursuant to TREP/PWP Phased Project Implementation requirements (Section 6.2.1), mitigation credits will be available to mitigate any project impacts included in an active project phase of the TREP/PWP Preliminary Phasing Plan (Initial-Term, Mid-Term, or Long-Term, as the case may be). Where habitat mitigation credit exceeds the cumulative project impacts of any particular project phase, habitat mitigation credit will be made available to offset impacts associated with project implementation of the following project phase.

The progress of restoration and enhancement activities in the corridor, which may have project components and/or procedures not subject to PWP/NOID procedures (i.e. large-scale restoration and monitoring plans for San Elijo and Buena Vista Lagoons) would be documented and reported, in conjunction with transportation project implementation, with NOID submittals for individual project proposals (Section 6.5.2). NOID submittals will include a discussion of the status of implementation of rail, highway, community and resource enhancement projects included in an active project phase, and will serve as a reporting mechanism for progress made toward achieving mitigation requirements of any particular active project phase, and toward achieving the goals of the Resource Enhancement Program.

6.2.2.4 Resource Enhancement Program Measures

The TREP/PWP Resource Enhancement Program, in conjunction with the TREP/PWP Preliminary Phasing Plan, would ensure transportation improvements are implemented such that the coastal resource benefits of each project phase are provided prior to, or concurrent with, implementation of transportation projects within that phase to ensure a “no net loss” of habitat with the corridor. In addition, the Resource Enhancement Program acknowledges the opportunities and need for both project-specific and in-kind habitat mitigation and for comprehensive restoration and maintenance activities for corridor lagoons. Given the unique nature of the corridor which contains a number of significant resources subject to varying degrees of degradation, restoration and maintenance activities, the TREP/PWP Resource Enhancement Program includes the following measures for completing and facilitating resource enhancement and habitat mitigation on a corridor-wide level.

No Net Loss Requirement. Each phase of development will include a habitat creation (or substantial restoration where determined appropriate) component within the corridor Coastal Zone area which achieves no net loss for all ESHA and wetland impacts at a minimum one acre of creation/restoration for one acre impact. All enhancements will occur within the NCC Coastal Zone area, to the maximum

extent feasible, unless all parties agree during applicable NOID procedures that a greater biological benefit could occur elsewhere. As advanced restoration and enhancement activities would eliminate impacts associated with temporal loss of ESHA and wetland habitat functions and value, standard mitigation ratio requirements are not applicable to the TREP/PWP mobility improvement projects.

Habitat Preservation. Additional habitat enhancement measures for the corridor may be fulfilled by acquisition of parcels containing existing in-kind habitat within the corridor Coastal Zone area, where permanent preservation of in-kind habitat can be demonstrated.

Corridor Lagoon Planning, Restoration, and Maintenance Efforts. In recognition of the unique opportunities and value of comprehensive lagoon restoration activities for corridor lagoons, habitat mitigation and enhancement (other than mitigation components necessary to meet no net loss of habitat) may consist of out-of-kind habitat restoration, with an emphasis on integrated lagoon ecosystem restoration and enhancement which provide significant ecological lift to the lagoon systems. This would include capital improvements that would promote tidal circulation in degraded lagoon systems, funding of maintenance activities necessary to sustain ongoing lagoon restoration efforts, and/or funding of critical study and planning activities necessary to facilitate and implement comprehensive lagoon restoration programs for San Elijo and Buena Vista Lagoons.

1. The Resource Enhancement Program should support efforts of the region to develop a comprehensive mitigation strategy for coastal lagoons utilizing the *TransNet* EMP as a complementary process to, and implemented by, the TREP/PWP Implementation Plan. In this regard, habitat mitigation credits may be established for out-of-kind habitat restoration with an emphasis on integrated lagoon ecosystem restoration and enhancement which provide significant ecological lift, with mitigation credits then made available, upon commencement of approved lagoon restoration plans, to compensate for habitat impacts associated with implementation of projects included in the TREP/PWP.
2. TREP/PWP transportation project elements potentially affecting lagoon habitat should, to the extent practicable, be phased to occur concurrently in individual lagoon systems and/or to occur concurrent with lagoon restoration plans. However, given the uncertainty of timing for developing and implementing restoration plans for corridor lagoons, and the presently unknown result of specific habit type to be restored, it is recognized the phasing of these lagoon restoration plans may precede or follow specific transportation project elements in the TREP/PWP. For this reason, the TREP/PWP Preliminary Phasing Plan provides for maximum flexibility for implementing TREP/PWP improvements to accommodate opportunities and uncertainties in potential future funding availability and operational system needs for both transportation facilities and comprehensive lagoon restoration projects in an effort to coordinate these projects to the extent feasible.
3. TREP/PWP project elements potentially affecting lagoon habitat should be designed to be consistent with lagoon restoration and management plans and to contribute to the success of lagoon restoration efforts and long-term management plans, where feasible. The Resource Enhancement Program should identify a process and thresholds for establishing and contributing to adaptive management actions to help ensure the success of lagoon restoration efforts and long-term management plans.
4. The Resource Enhancement Program may provide the opportunity to establish habitat mitigation credits based on per acre habitat restoration cost analyses (inclusive of costs associated with capital improvements, maintenance activities, and technical study and planning; examples include supporting activities which improve tidal circulation and

maintenance efforts to reduce sedimentation within the lagoons), in which case mitigation credits would then be available to compensate for habitat impacts associated with implementation of projects included in the TREP/PWP in exchange for financial contribution to capital improvements, ongoing maintenance efforts, and critical study and planning activities necessary to facilitate and implement lagoon restoration programs. Funds from the program would be utilized, per agreement of all partners, to develop a comprehensive strategy for enhancement of corridor lagoons, which may involve, among other things, development of a needs assessment, a prioritization of those needs, and an implementing strategy given available funding.

As listed in the Preliminary Phasing Plan, Table 6-2, and described in Section 4.4.2 of Chapter 4 (Scope of Planned Improvements), the region has identified and secured a number of opportunities along the NCC to meet the three mitigation and enhancement measures of the Resource Enhancement Program detailed above. Regionally important restoration opportunities in the corridor have been discussed with the resource agencies and, in some cases, the opportunity to implement site-specific restoration efforts has already been secured via land acquisition of suitable restoration sites. Further, as described in Chapter 2, three of the corridor's six coastal lagoons, Los Peñasquitos, San Dieguito and Batiquitos, have been subject to past restoration efforts and have ongoing restoration programs. Restoration plans for the other three corridor lagoons (San Elijo, Agua Hedionda and Buena Vista) are currently being considered or actively pursued. San Elijo and Buena Vista Lagoons are the two lagoons within the project limits where large-scale restoration plans are underway. SANDAG/Caltrans have been working with the cities, resource agencies, and stakeholders to help move these restoration projects forward by assisting in planning and funding associated technical and environmental studies. In addition, SANDAG/Caltrans are currently funding a study to optimize I-5 bridge designs at the corridor lagoons to minimize tidal muting east of I-5. These designs may result in possible creation and/or enhancement of wetland habitat and water quality benefits within the lagoons. The results of this study will assist in further developing the resource enhancement opportunities package discussed in Section 6.2.2.2. It is expected additional coordination with agencies and stakeholders as well as further study of the corridor's opportunities will supplement the opportunities included in Table 6-2 to achieve the goals of the Resource Enhancement Program.

6.3 INTERPRETATION AND USE OF THE PWP

As detailed in Chapter 1 of the TREP/PWP and Section 6.1, the LOSSAN rail projects included in the TREP/PWP which improve the movement of freight fall under the exclusive jurisdiction of STB and are, therefore, not subject to coastal development permit or public works plan requirements. The standard of review for these rail projects will continue to be the Chapter 3 policies if the Coastal Act as applied during the federal consistency review process (Section 6.4), rather than consistency with the TREP/PWP.

The federal consistency certification provisions described in Section 6.4 below apply only to the LOSSAN rail projects that do not require approval under the PWP or individual coastal development permits, except as may otherwise be applicable for potential future PWP amendments to approved highway and associated community enhancement projects (as specified in Section 6.4.2.5). For the highway, community and resource enhancement improvements subject to both federal consistency and PWP requirements, the TREP/PWP provides a coordinated document to obtain federal consistency certification for these improvements, which will receive a permit from the Coastal Commission pursuant to the PWP review procedures described in Section 6.5 and, therefore, do not require a separate consistency certification. These TREP/PWP improvements shall be found consistent with the

TREP/PWP and all policies and implementation measures contained in Chapters 5 and 6, and shall be subject to the PWP Development Review Procedures describe in Section 6.5.

Table 6-3 lists the proposed TREP/PWP transportation improvements by project phase and identifies those projects subject to federal consistency review and/or PWP requirements or, as it applies to rail improvements which do not fall under the exclusive jurisdiction of STB (station, parking improvements, etc.), potential coastal development permit (CDP) requirements. Further, TREP/PWP community and resource enhancement improvements would be subject to PWP requirements, with the exception of large-scale lagoon restoration plans, which would require separate CDPs.

6.4 FEDERAL CONSISTENCY REVIEW PROCEDURES

Given the TREP/PWP program-level of detail available to evaluate potential coastal resource impacts from rail improvement projects, it is anticipated federal consistency review may need to be conducted in a phased manner for proposed rail improvements. As rail projects are further developed, additional federal consistency review would be conducted, as necessary, for the proposed TREP/PWP rail improvements that require federal permits, federal authorization, and/or federal funding. In addition, Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), Federal Transit Administration (FTA), US Army Corp of Engineers (USACE) and other federal agency procedures require the Coastal Commission's concurrence with consistency certification prior to finalizing any Environmental Impact Statement (EIS) and issuance of a Record of Decision (ROD) for proposed TREP/PWP projects.

Further, should modifications to highway, community and resource enhancement project design and/or changes within the project area create the potential for resource impacts not considered during federal consistency review for the TREP/PWP, additional federal consistency review may be required. In such instances, the TREP/PWP may be amended pursuant to Section 6.6 of this chapter, and may potentially require phased or re-opening of the federal consistency review process.

6.4.1 Federal Consistency Certification Submittal Contents

A Federal Consistency Certification submittal to the Commission for any individual TREP/PWP project, or package of projects, shall be clearly titled as such and shall, at a minimum, include the following information regarding the proposed development project or activity:

1. The project description and location, and identification and availability of associated National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) documents, including relevant studies, reports, and technical materials included as part of, or supporting, the project environmental review and consistency certification.
2. Copy/ies of any applicable federal permit application/s and relevant material provided to the federal agency in support of the application/s and which is relevant to the federal consistency certification.
3. A detailed description of the proposed project or activity, its associated facilities, the coastal effects, and any relevant project plans, mapping, data, technical studies, or other information sufficient to support the consistency certification.

TABLE 6-2: POTENTIAL WETLAND & UPLAND ESHA IMPACTS & MITIGATION/ENHANCEMENT OPPORTUNITIES (NORTH COAST CORRIDOR)

Maximum Impact* (Acres)	Creation (Acres)	Restoration (Acres)	No Net Loss Comparison (Acres)	Preservation (Acres)	Enhancement Opportunities
WETLANDS**					
I-5 Corridor: 25-33.5 LOSSAN Corridor: 26-30	San Dieguito River Valley: 50 Hallmark: 4.2 Pardee Carmel Valley: 11.5		Impact: 51-63.5 Creation: 65.7 Restoration: 0	Hallmark: 1.5	– San Elijo Lagoon Restoration – Buena Vista Lagoon Restoration – Lagoon Endowments
Total Impact: 51-63.5	Total Creation: 65.7		Net Gain: +2.2 - +14.7	Total Preservation: 1.5	
UPLAND ESHA***					
I-5 Corridor: 75.5-103.5 LOSSAN Corridor: 17.5-20	San Dieguito River Valley: 57 Dean: 21.6 Pardee Carmel Valley: 10.7	Pardee Carmel Valley: 5.7	Impact: 93-123.5 Creation: 89.3 Restoration: 5.7	Hallmark: 10.8 Dean: 1.5 La Costa: 20.5 Lazar: 3.6	– San Elijo Lagoon Restoration – Buena Vista Lagoon Restoration – Lagoon Endowments
Total Impacts: 93-123.5	Total Creation: 89.3	Total Restoration: 5.7	Net Loss/Gain: -28.5 - +2	Total Preservation: 54.5	

* Impact totals include I-5 corridor highway and community enhancement projects and LOSSAN rail projects included in the Preliminary Phasing Plan Table 6-1, except LOSSAN rail improvements identified as Unconstrained Vision.

** Includes marine and freshwater wetlands.

*** I-5 upland ESHA totals include Baccharis scrub, coastal sage scrub, chaparral, southern maritime chaparral, coastal bluff scrub, maritime succulent scrub, and saltbush scrub. LOSSAN upland ESHA totals include coastal sage scrub, chaparral, and oak woodland.

TABLE 6-3: PROJECT-SPECIFIC FEDERAL CONSISTENCY REVIEW AND/OR PWP OR CDP PROCEDURE REQUIREMENTS (PRELIMINARY PHASING PLAN)

Phase	Transportation Improvements	Federal Consistency (FC) and/or PWP or CDP Requirement[1]
Initial-Term	I-5 HIGHWAY	
	2 HOV lanes & noise barriers – Manchester to La Costa	FC/PWP
	2 HOV lanes & noise barriers – La Costa to SR 78	FC/PWP
	2 ML from La Jolla Village Dr to SR 56, includes Voigt DAR & I-5 /I-805 HOV Connector	FC/PWP
	2 ML from SR 56 to Manchester, includes Manchester DAR & San Elijo Lagoon Bridge Replacement	FC/PWP
	Genesee SB Operational Improvements	FC/PWP
	LOSSAN	
	5a – Oceanside Coaster Stub Track	FC
	5c – Oceanside Metrolink Stub Track	FC
	8 – Carlsbad (CP Carl to CP Farr) Double Track	FC
	22a – Sorrento Valley Double Track	FC
	23 – Sorrento to Miramar Phase I	FC
	35 – Poinsettia Station Run-Thru Track	FC
Mid-Term	I-5 HIGHWAY	
	2 ML from Manchester to Agua Hedionda Lagoon, includes Cannon DAR & Batiquitos and Agua Hedionda Bridge Replacements	FC/PWP
	Ramp Meter Interconnect ITS Improvements	FC/PWP
	Palomar Airport Ops Improvements (Aux Lanes)	FC/PWP
	I-5/SR 56 Interchange Improvements (Pending)	FC/PWP
	LOSSAN	
	3 – CP Eastbrook to CP Shell Double Track	FC
	6 – Carlsbad Village Double Track	FC
	12 – Encinitas Pedestrian Crossings	FC/PWP or CDP
	13 – Encinitas Station Parking	FC/PWP or CDP
	15 – CP Cardiff to CP Craven – San Elijo Lagoon Double Track	FC
	16 – Solana Beach Station Parking	FC/PWP or CDP

1 The PWP itself serves as Coastal Commission concurrence with the consistency certification for the non-rail projects that are being approved under the PWP. Therefore, projects listed as requiring both a federal consistency certification and a PWP will not go through a separate consistency certification process.

TABLE 6–3: PROJECT-SPECIFIC FEDERAL CONSISTENCY REVIEW AND/OR PWP OR CDP PROCEDURE REQUIREMENTS (PRELIMINARY PHASING PLAN) (CONTINUED)

Phase	Transportation Improvements	Federal Consistency (FC) and/or PWP or CDP Requirement
Long-Term	I-5 HIGHWAY	
	2 ML from Agua Hedionda Lagoon to SR 78	FC/PWP
	4 ML from SR 78 to Harbor Drive, includes Oceanside Blvd DAR & Buena Vista Lagoon Bridge Replacement	FC/PWP
	I-5/SR 78 Interchange Improvements (Pending)	FC/PWP
	Construct Braided Ramps from Genesee to Sorrento Valley	FC/PWP
	LOSSAN	
	5b – Oceanside Station Parking	FC/PWP or CDP
	7 – Carlsbad Village Station Parking	FC/PWP or CDP
	9 – Carlsbad Poinsettia Station Parking	FC/PWP or CDP
	10 – CP Ponto to CP Moonlight Double Track	FC
	14 – CP Moonlight to CP Swami Double Track	FC
	17 – San Dieguito Bridge/Double Track	FC
	18 – Del Mar Fairgrounds Platform	FC/PWP or CDP
	24 – Sorrento to Miramar Phase II	FC
Vision	LOSSAN	
	11 – Leucadia Blvd Grade Separation	FC
	19 Del Mar Bluffs Stabilization Phase 3	FC/PWP or CDP
	20/21 – Del Mar Tunnel – Camino Del Mar / Penasquitos Double Track Option – I-5 / Penasquitos Option	FC
	22b – Penasquitos Double Track	FC
	25/26 – UTC Tunnel – UTC Alignment Option – I-5 Alignment Option	FC

4. A detailed consistency certification (an evaluation that includes a set of findings relating to the coastal effects of the proposed project or activity with applicable Chapter 3 policies of the Coastal Act), which includes a statement that, "*The proposed activity complies with California's approved Coastal Zone Management Program and will be conducted in a manner consistent with such program*."
5. Where the consistency certification is contained in associated project NEPA/CEQA documentation, a cover letter identifying that the NEPA/CEQA document contains the analysis and where the analysis is included in the NEPA/CEQA document.

6.4.2 Commission Review of Federal Consistency Certification

Where applicable, SANDAG/Caltrans will arrange a meeting with the Executive Director of the Commission prior to submittal of a Federal Consistency Certification to allow time for pre-consultation on the proposed development or activity. SANDAG/Caltrans will notify the Executive Director of the Commission a minimum of 90-days prior to final approval of a federal action (i.e., a Record of Decision or Finding of No Significant Impact).

Upon formal submittal of a Federal Consistency Certification to the Executive Director, the Commission shall review the Federal Consistency Certification in accordance with the procedures set forth in Sections 6.4.2.1–6.4.2.5.

6.4.2.1 Commission Acceptance/Process of Consistency Certification Waiver Request

1. Should SANDAG/Caltrans, or other project Lead Agency, determine a particular project activity is de minimis and would not affect coastal resources, and Commission confirmation is required, the agency/ies may request a waiver of the consistency certification requirement.
2. A consistency certification waiver request must contain a brief description of the proposed development or activity, the project or activity location, and the basis for the request, including an analysis of the proposed project or activity with applicable Chapter 3 policies, sufficient for the Commission to evaluate whether the project or activity would affect coastal resources.
3. Within 30 days of receipt of consistency certification waiver request and all applicable supporting information for a proposed development project, the Executive Director of the Commission shall review the submittal and notify SANDAG/Caltrans or other project Lead Agency that:
4. The subject consistency certification is waived
5. Additional information is necessary to adequately review the consistency certification waiver request, and if additional information is deemed necessary, shall request such information from SANDAG/Caltrans or other project Lead Agency, or
6. The subject consistency certification is not waived and a consistency certification for the proposed project or activity must be submitted for review by the Commission.

6.4.2.2 Commission Acceptance/Processing of Consistency Certification

Within 30 days of receipt of the Federal Consistency Certification and all applicable supporting information for a proposed project or activity as described in Section 6.4.1, the Executive Director of the Commission shall review the submittal and notify SANDAG/Caltrans or other project Lead Agency that additional information is necessary to adequately review the consistency certification, and if additional information is deemed necessary, shall request such information from SANDAG/Caltrans or other

project Lead Agency and the federal permitting agency, or shall notify SANDAG/Caltrans or other project Lead Agency that the submittal is deemed complete and accepted processing.

1. The consistency certification will be deemed complete if the Executive Director does not respond within 30 days to the consistency certification submittal or to a submittal with additional information made in response to the Executive Director's request for such information.
2. The consistency certification will be deemed complete upon receipt and review of the Executive Director, within 30 days, of any additional information submitted in response to the Executive Director's request for such information.
3. Once deemed complete, a staff report will be prepared and public notice provided for Commission action on the consistency certification within six months.
   a. If the Commission has not issued a decision on the consistency certification within three months of the date the consistency certification was deemed complete, the Commission will notify SANDAG/Caltrans or other project Lead Agency and the federal permitting agency of the status of the matter and the basis for any further delay.
   b. Commission concurrence with the consistency certification within six months of the date the consistency certification was deemed complete can be conclusively presumed if the Commission does not act within six months of the date the consistency certification was deemed complete. The Commission's hearing deadline may be extended if, on or before the hearing deadline, SANDAG/Caltrans, or other project Lead Agency and the federal permitting agency, and the Commission agree to an extension of the hearing deadline to allow Commission review to occur at a later hearing. An extension of the Commission's hearing deadline shall be for no more than six months from the original hearing deadline as established by the date the consistency certification was deemed complete.
4. The Commission will hold a public hearing and may take action to concur, conditionally concur with, or object to the consistency certification as described in Sections 6.4.2.3 and 6.4.2.4.

6.4.2.3 Commission Concurrence with Consistency Certification

1. The Commission will hold a public hearing and may concur with the consistency certification, based on the project or activity's consistency with Chapter 3 policies of the Coastal Act.
2. The Commission may conditionally concur with a consistency certification. Such conditions must be based on the project or activity's consistency with Chapter 3 policies of the Coastal Act. Should SANDAG/Caltrans, or other project Lead Agency or the federal permitting agency, not agree with the conditions and/or does not modify the project or activity to incorporate the conditions, the Commission's conditional concurrence will be treated as an objection.
3. Conditional concurrences for federal license or permit and federal assistance activities are appealable to the Secretary of Commerce.

6.4.2.4 Commission Objection to Consistency Certification

1. The Commission may object to a consistency certification by finding the information supplied is insufficient to enable the Commission to assess the activity for consistency with the Chapter 3 policies of the Coastal Act, in which case the Commission will identify the information and the reason it is necessary to assess consistency of the project or activity's consistency with applicable Chapter 3 policies of the Coastal Act.

2. The Commission may object to a consistency certification by finding the proposed project or activity is inconsistent with the Chapter 3 policies of the Coastal Act, in which case the Commission will identify alternative measures, where such measures exist, that would cause the Commission to concur with the consistency certification.
3. A Commission objection to a consistency certification may be appealed to the Secretary of Commerce within 30 days from receipt of the objection.

6.4.2.5 Consolidated Review of Consistency Certification and PWP Amendment

Wherever possible and as requested by SANDAG/Caltrans or other project Lead Agency, the Executive Director of the Commission should recommend to the Commission consolidated review of any consistency certification and associated application for a PWP Amendment and/or CDP where required for rail, highway, community or resource enhancement projects included in the TREP/PWP.

6.5 PWP Development Review Procedures

All TREP/PWP improvements subject to PWP requirements shall be subject to the PWP development review procedures describe in this section. The following procedures and standards are applicable to all transportation, community, and resource enhancement improvements permitted in the TREP/PWP and subject to PWP requirements, except as provided for in Section 6.5.6, Development Excluded from Project Specific NOID procedures.

The NOID process PWP projects must undertake in order to begin construction is outlined in Figure 6-4.

6.5.1 Development Consistency

Development shall be deemed consistent with the TREP/PWP if it is found consistent with the following provisions of the TREP/PWP:

The development is consistent with the scope of planned improvements detailed in Chapter 4.

1. The development is consistent with the resource-specific policy and implementation measures included in Chapter 5.
2. The development is consistent with the phasing and implementation requirements contained in Section 6.2.

Figure 4-5 and Table 6-1 (Implementation Framework), identify the type, location, and size of development permitted by this TREP/PWP. Development shall not be authorized unless it is of a type, location, and size contemplated by Chapter 4, and it is demonstrated project implementation is in compliance with all policies and implementation measures of Chapters 5 and 6 of the TREP/PWP, as applicable.

6.5.2 NOID Contents

A NOID for any individual transportation, community or resource enhancement project shall be clearly titled as such, shall be submitted to the Executive Director of the Commission at least 30 working days before the beginning of construction, and shall, at a minimum, include the following information regarding the development project authorization:

1. The project description and location, including identification and availability of a project report (prepared pursuant to Section 6.5.3) and information regarding where and when it is available

for public review. Copies of associated lengthy and/or oversized studies, reports, and technical materials included as part of the project report shall be provided to the executive director, and to interested persons and agencies which specifically request these materials.

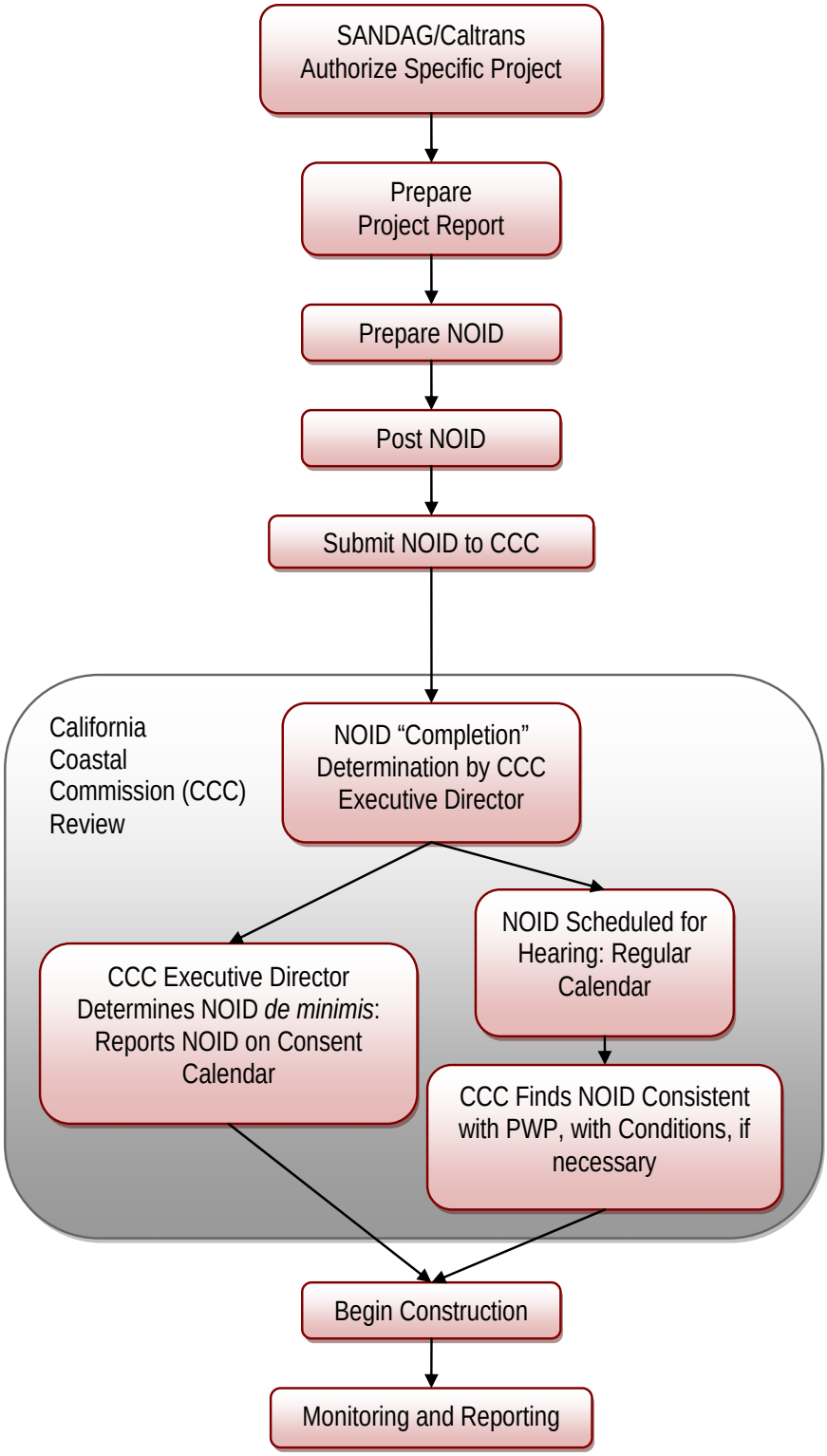
2. The expected date of commencement of construction;
3. The appropriate Caltrans and/or SANDAG contact person(s) and/or designated project manager and their contact information;
4. A list of recipients of the NOID.
5. Supporting information sufficient to allow the Executive Director to determine whether the proposed development project is consistent with the certified TREP/PWP shall accompany the NOID submitted to the Executive Director, and to persons and agencies requesting such information. At a minimum, the supporting information shall include:
   a. Any final authorization documents from SANDAG/Caltrans (e.g., approval, resolutions, certifications, etc.) not included in the project report
   b. A separate document that identifies all applicable project conditions, mitigations and implementation measures for the proposed development project
   c. Copies of all correspondence received on the proposed development project; and
   d. For the Executive Director only:
      i. A mailing list with names and addresses for each of the persons and/or agencies provided with the NOID;
      ii. One set of plain (i.e., unadorned with no return address) regular business size (9-inch by 4-inch) envelopes stamped with first class postage (metered postage is not acceptable) addressed to all interested persons and agencies, for each Commission hearing on the matter (i.e., if there are multiple Commission hearings on the matter, then multiple envelop sets shall be provided as directed by the executive director); and,
   e. Evidence that the NOID has been posted pursuant to the parameters of Section 6.5.4 (evidence might include a site plan with the notice locations noted and/or photos of the notice locations attached).

6.5.3 Preparation of Project Reports

Except as provided in Sections 6.5.6 and 6.7, SANDAG/Caltrans shall prepare a project report to accompany the NOID submittal for each development project included in the TREP/PWP and subject to PWP requirements. The project report shall include any information deemed necessary by SANDAG/Caltrans to satisfy the standards for development authorization set forth in this TREP/PWP. At a minimum, the project report shall include:

1. A description of the proposed development that is: sufficient to understand its size, location, type, and intensity (including but not limited to site plans, grading plans, and elevations/renderings showing the proposed development, where applicable) sufficient to determine the development is contained in the TREP/PWP.
2. A consistency analysis of the proposed development with all applicable Chapter 5 policies and implementation measures.

FIGURE 6-4: NOTICE OF IMPENDING DEVELOPMENT (NOID) PROCESS



3. A discussion of the proposed development consistency with the Preliminary Phasing Plan detailed in Section 6.2.1 including details regarding:
   a. The project phase in which the development is included
   b. The status of implementation of other rail, highway, community and resource enhancement projects included in the same phase
   c. A brief summary of the proposed development's contribution to the mobility and resource benefits of the project phase
   d. Description of any project-specific resource impacts and status of corresponding mitigation requirements for the project phase.
   e. A detailed discussion and justification for any proposed project shift between project phases as provided in the Preliminary Phasing Plan (Table 6-1).
4. Environmental documentation for the proposed development prepared pursuant to CEQA and/or NEPA.
5. All technical reports associated with the proposed development (such as biological reports, geotechnical reports, traffic analyses, etc.), including all reports, studies, and/or project-specific plans required pursuant to applicable Chapter 5 implementation measures.
6. The results, including supporting documentation, of consultation with persons and agencies interested in, with jurisdiction over, and/or affected by the proposed development, including consultations with federal and state resource agencies (such as the United States Fish and Wildlife Service, California Department of Fish and Game, Regional Water Quality Control Board, etc.)
7. All implementing mechanisms associated with the proposed development including, but not limited to, Cooperative Maintenance agreements with affected cities for Community Enhancement Projects as detailed in Section 5.7 of Chapter 5, CEQA mitigation monitoring reports, legal documents, lease agreements, etc.
8. All correspondence received on the proposed development
9. Identification of a person (project manager, Resident Engineer) responsible for ensuring the proposed development is constructed to authorized specifications, that all terms and conditions of approval are met, and that any budget shortfalls which could affect these commitments are identified and brought to the attention of decision-makers; and
10. Findings:
    a. The proposed development has been reviewed in compliance with the CEQA and/or NEPA, and all conditions and/or mitigation measures identified in those CEQA and/or NEPA documents have been incorporated as part of the proposed development;
    b. The proposed development project advances the purpose of this TREP/PWP, as set forth in Chapter 3;
    c. The proposed development has been reviewed by any affected local jurisdiction, resource and/or lagoon conservancy, and comments have been reviewed and considered.
    d. The proposed development, as modified by any conditions and/or mitigation measures incorporated as part of the project, is contained in and is consistent with the certified TREP/PWP.

6.5.4 NOID Posting Requirements

The NOID shall be posted in conspicuous locations at the proposed development site when the NOID is submitted pursuant to the procedures set forth in this section, and at least 30 working days before beginning of construction. The notices shall be subject to the following parameters:

1. Posted notices shall be sized and located in an area easily read by the public and as close to the proposed development site as is feasible.
2. Notices shall indicate that a NOID has been submitted to the Commission for proposed development and shall contain a general description of the nature of the proposed development.
3. Notices that may become illegible, and/or that fall to the ground or disappear must be replaced, and shall remain posted until the effective date of development authorization.

6.5.5 Commission Review of NOID

Where feasible, SANDAG/Caltrans will arrange a meeting with the Executive Director of the Commission prior to submittal of a project-specific NOID to allow time for pre-consultation on the proposed development.

Upon submittal of a NOID to the Commission, the Executive Director shall review the proposed development project/s contained in the NOID for consistency with the TREP/PWP in accordance with the procedures of this section.

6.5.5.1 Filing the NOID

Within 5 working days of receipt of the NOID and all applicable supporting information for a proposed development project (as described in Sections 6.5.2 and 6.5.3), the Executive Director shall review the submittal and shall determine whether the NOID is “complete”, or whether additional information is necessary to determine if the proposed development project is consistent with the TREP/PWP, and if additional information is deemed necessary, shall request such information from the project manager. The NOID shall be deemed filed as follows:

1. The NOID shall be deemed “complete” if the Executive Director does not respond to the NOID or any subsequent information submittal within 5 working days following its receipt; the NOID shall be deemed “complete” on the 5th working day following the Executive Director’s receipt of the NOID or to a submittal with additional information made in response to the Executive Director’s request for such information.
2. The NOID shall be deemed “complete” when all necessary information requested for purposes of reviewing the proposed project’s consistency with the TREP/PWP has been received by the Executive Director. In the event of disagreement concerning the need for additional information or the adequacy of information submitted to enable the Commission to analyze project consistency with the certified TREP/PWP, SANDAG/Caltrans may appeal the Executive Director’s determination that additional information is needed to the Commission for resolution. The Executive Director shall schedule the matter for hearing and resolution at the next Commission meeting or as soon thereafter as practicable, but no later than 60 calendar days after the Executive Director’s receipt of written appeal by SANDAG/Caltrans expressing disagreement with the Executive Director’s determination that additional information is needed to analyze project consistency with the certified TREP/PWP. The appeal shall be scheduled and heard by the Commission in accordance with the procedures set forth in California Code of

Regulations, Title 14 Section 13056(d). The Executive Director shall notify SANDAG/Caltrans, no later than 60 calendar days after the Executive Director's receipt of written appeal by SANDAG/Caltrans, of any change in the Executive Director's determination that additional information is necessary to analyze project consistency with the certified TREP/PWP as directed by the Commission.

6.5.5.2 Commission Hearing Deadline

The Commission shall hold a hearing on the NOID no later than thirty 30 (thirty) working days following the day the NOID is deemed "complete". If the Commission fails to act upon the NOID on or before the hearing deadline, the noticed development project shall be deemed consistent with the certified TREP/PWP. The hearing deadline may be extended if, on or before the hearing deadline, SANDAG/Caltrans waive the right to a hearing within 30 working days to allow Commission review to occur at a later hearing, and agrees to an extension to a date certain. An extension of the Commission's hearing deadline shall be for no more than three months from the original hearing deadline as established by the date the NOID was deemed complete.

6.5.5.3 Commission Review and Determination of Consistency with TREP/PWP

1. The Executive Director shall report, in writing to the Commission, the pendency of the proposed development project for which a NOID has been deemed complete. The Commission shall review the proposed development project at a scheduled public hearing prior to the hearing deadline.
2. If the Executive Director determines one or more proposed development projects are *de minimis* with respect to the purposes and provisions of the TREP/PWP, they may be scheduled for the Commission's review at one public hearing, during which all such items may be taken up as a single matter pursuant to procedures comparable to the Commission's consent calendar procedures (California Code Regulations, Title 14, Sections 13101 through 13103).
3. For all other proposed development projects, the Executive Director's report to the Commission shall include a description sufficient to allow the Commission to understand the location, nature, and extent of the proposed development, and a discussion and recommendation regarding the consistency of the proposed development project with the certified TREP/PWP. On or before the hearing deadline, the Commission, by a majority of its membership present, may take one of the following actions on a proposed development project:
   a. Determine the proposed development project is consistent with the certified TREP/PWP, or
   b. Determine the proposed development project is not consistent with the certified TREP/PWP and vote to impose conditions necessary to render the proposed development project consistent with the certified TREP/PWP. The Commission may also impose conditions necessary to render the proposed development project consistent with the certified TREP/PWP at the next scheduled hearing.
4. Following the Commission's action, the Executive Director shall inform SANDAG/Caltrans of the Commission's action and shall forward any conditions associated with the action. If the Commission has voted to impose condition/s necessary to render the project consistent with the TREP/PWP, development shall not be undertaken until the conditions have been incorporated into the project. The Commission review of a proposed development project shall be deemed complete on either:
   a. The date of a Commission action determining the proposed development project is consistent with the TREP/PWP (with or without conditions to render it consistent); or

b. If the Commission has failed to take action on the proposed development project by the hearing deadline, the date of the hearing deadline.

5. Upon completion of the Commission's review, SANDAG/Caltrans may undertake the development project provided any conditions imposed by the Commission to render the development consistent with the TREP/PWP have been incorporated into the project.

6.5.6 Development Excluded from Project Specific PWP NOID Procedures

The categories of development identified in this section are excluded from the requirements of the PWP development review procedures described in Sections 6.5.1-6.5.4.

The categories of development covered by this section are as follows:

1. Maintenance dredging of existing navigation channels or moving dredged material from the channels to an area outside the Coastal Zone, pursuant to a permit from the United States Army Corps of Engineers.
2. Repair and maintenance activities specifically described in the document titled "Repair, Maintenance and Utility Hook-up Exclusions from Permit Requirements," adopted by the Commission on September 5, 1978.
3. Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair and maintenance activities provided the activity does not include:
   a. Any method of repair or maintenance of a seawall, revetment, bluff retaining wall, breakwater, groin, culvert, outfall, or similar shoreline work that involves substantial alteration of the foundation of the structure being repaired or maintained placement of rip-rap or other solid material on a beach or in coastal waters, streams, estuaries, or wetlands, or on a shoreline protective work; replacement of 20 percent or more of the materials of an existing structure with materials of a different kind; or the presence of mechanized construction equipment or construction materials on any sand area, bluff, or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams.
   b. Any repair or maintenance to facilities, structures, or work located in an environmentally sensitive habitat area, any sand area, within 50 feet of the edge of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams, that includes: (a) the placement or removal, whether temporary or permanent, of rip-rap, rocks, sand, other beach materials, or any other form of solid materials; and/or (b) the presence, whether temporary or permanent, of mechanized equipment or construction materials.
   c. Any routine maintenance dredging or disposal of dredge materials that involves the dredging of 100,000 cubic yards or more within a 12-month period; the placement of dredged spoils of any quantity within an environmentally sensitive habitat area, on any sand area, within 50 feet of the edge of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams; or the removal, sale, or disposal of dredged spoils of any quantity that would be suitable for beach nourishment in an area the Commission has declared by resolution to have a critically short sand supply that must be maintained for protection of structures, coastal access or public recreational use.
4. Installation, testing, and placement in service or the replacement of, any necessary utility connection between an existing service facility and any authorized development, including utility hook-up activities described in the document entitled "Repair, Maintenance and Utility

Hook Up Exclusions from Permit Requirements," adopted by the Commission on September 5, 1978.

5. Development authorized by a coastal development permit issued by the Commission prior to certification of this TREP/PWP.

6.6 AMENDMENT OF TREP/PWP PROJECT AUTHORIZATIONS

Development in the NCC highway and rail corridors which requires amendment for a project approved prior to TREP/PWP certification, and which is subject to coastal development requirements, shall be pursued through the appropriate authority having jurisdiction over such coastal development permit, unless SANDAG/Caltrans and the Executive Director of the Commission determine review of the amended project under PWP procedures is more appropriate.

Authorization for development that has been deemed consistent with the TREP/PWP by SANDAG/Caltrans and the Commission may be subsequently amended as necessary according to the following procedures and as set forth in California Code of Regulations, Title 14 Section 13365 Amendment of Public Works Plan. The PWP amendment process is illustrated in Figure 6-5.

Design modifications and/or changed site conditions (new or changed resources) which deviate from the scope and/or conditions documented in the approved TREP/PWP, but that do not result in significant new impacts to coastal resource, and/or result in impacts which are addressed with adopted TREP/PWP policies and implementation measures, will not require an amendment to the approved TRE/PWP and may be reviewed and implemented by the Commission according to the NOID procedures included in this Chapter.

6.6.1 Public Hearing at Local Level

Prior to the submission of an application for an amendment to the PWP, SANDAG/Caltrans shall demonstrate a public hearing at the local level has been held on the proposed amendment within a reasonable time prior to submission of the amendment application to the Commission. In determining the reasonableness of the time of the public hearing(s), the Executive Director shall consider the location, scope or size of the PWP project or activity subject to amendment, the progress of SANDAG/Caltrans toward obtaining all funding and governmental approvals for the amendment project or activity, and development of the PWP amendment. A steady progression of SANDAG/Caltrans toward development of the PWP amendment in this manner, after holding public hearings on the amendment, shall constitute evidence of the reasonableness of the time of the prior public hearing.

6.6.2 Amendment Application Contents and Commission Review of Application

1. An application for an amendment to the PWP shall be submitted to the Executive Director of the Commission and shall contain sufficient information regarding the type, size, intensity and location of amended development activity intended to be undertaken pursuant to the PWP and/or any changes to PWP policies, standards or procedures to determine consistency with applicable policies of Chapter 3 of the Coastal Act and/or the certified LCP including, but not limited to the following, where applicable:
   a. The specific type of activity or activities proposed to be undertaken
   b. The maximum and minimum intensity of activity or activities proposed to be undertaken (e.g., maximum traffic capacity of a road)

c. The maximum size of facilities proposed to be constructed pursuant to the plan (e.g., number of lanes of a road) and the proposed timetable for precise definition of all projects included in the plan and any phasing of development activity contemplated

d. The service area for the proposed activity or activities

e. The proposed method of financing the activity or activities including any direct or indirect means of obtaining or guaranteeing funds through the assessment or any other form of levy against lands located within the coastal zone and an estimate of the projected amount of revenues to be obtained from land or water areas located in the coastal zone over the useful life of the proposed development

f. Environmental analysis, reports, studies, maps, etc. prepared for the PWP amendment and relevant to the analysis of the PWP amendment's consistency with Chapter 3 policies of the Coastal Act and/or the certified LCP, as applicable.

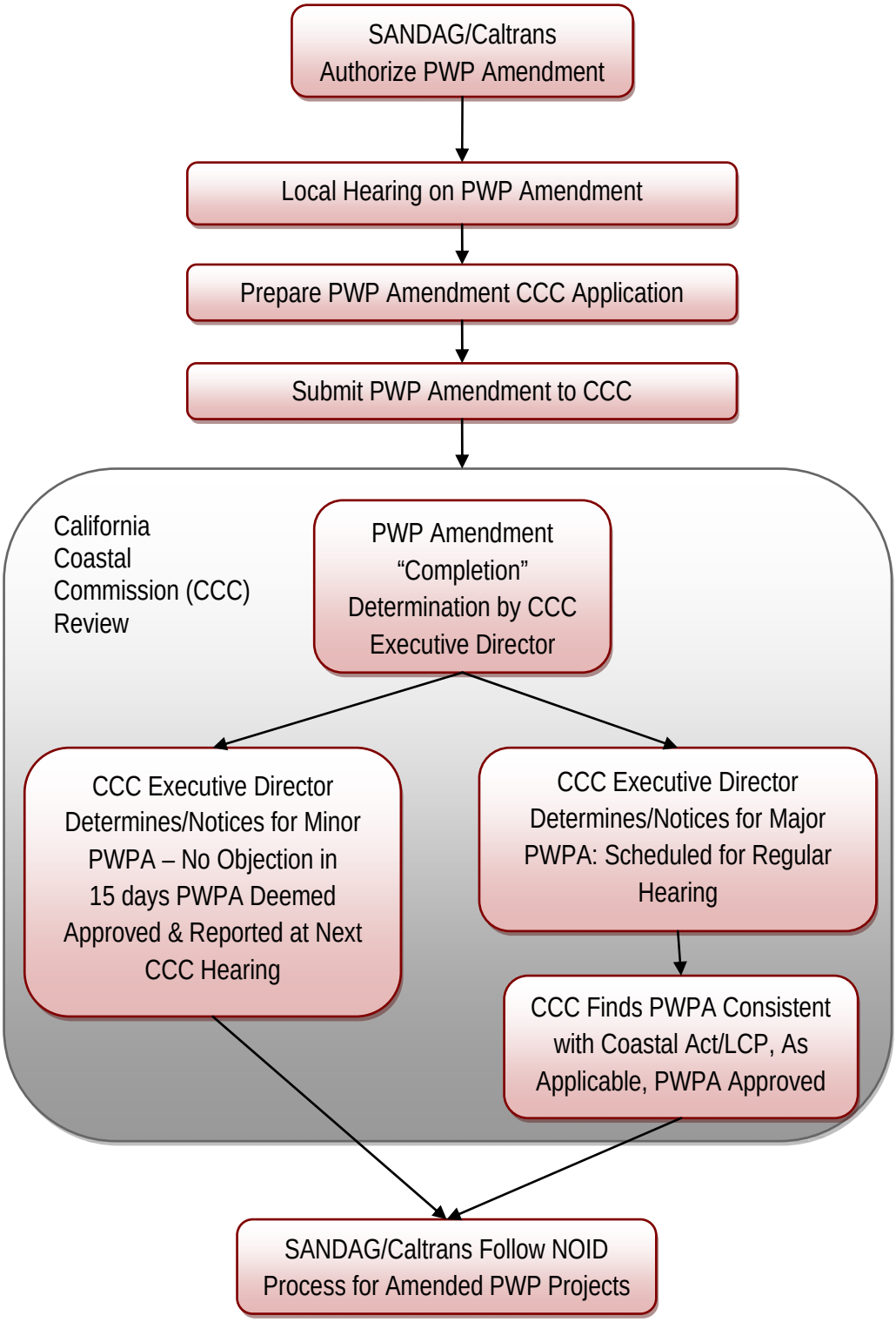
g. The proposed location or alternative locations considered for any development activity or activities to be undertaken pursuant to the proposed plans.

h. The Executive Director of the Commission may require the submission of any additional information deemed necessary to determine consistency of the proposed amendment with Chapter 3 policies of the Coastal Act and/or the certified LCP, as applicable.

2. The Executive Director of the Commission shall deem a PWP amendment application complete at such time as the Executive Director determines the information required pursuant to this section has been received at the appropriate Commission office. Said review shall be completed within no later than five (5) working days after the date it is received in the district office of the Commission during normal business hours, unless there are unusual circumstances, in which case said review shall be completed within no later than thirty (30) calendar days after the date it is received. Immediately upon making such determination, the Executive Director shall affix the date of filing to the application file and notify SANDAG/Caltrans of the application completeness determination.

3. In the event of disagreement concerning the need for additional information or the adequacy of information submitted to enable the Commission to analyze the PWP amendment for consistency with Chapter 3 of the Coastal Act or certified LCP, as applicable, SANDAG/Caltrans may appeal the Executive Director's determination that additional information is needed to the Commission for resolution. The Executive Director shall schedule the matter for hearing and resolution at the next Commission meeting or as soon thereafter as practicable, but no later than 60 calendar days after the Executive Director's receipt of written appeal by SANDAG/Caltrans expressing disagreement with the Executive Director's determination that additional information is needed to analyze the PWP amendment for consistency with Chapter 3 of the Coastal Act or certified LCP, as applicable. The appeal shall be scheduled and heard by the Commission in accordance with the procedures set forth California Code of Regulations, Title 14 Section 13056(d). The Executive Director shall notify SANDAG/Caltrans, no later than 60 calendar days after the Executive Director's receipt of written appeal by SANDAG/Caltrans, of any change in the Executive Director's determination that additional information is necessary to analyze project consistency with the certified TREP/PWP as directed by the Commission.

FIGURE 6-5: PUBLIC WORKS PLAN AMENDMENT PROCESS



4. The Executive Director shall provide, make available to the public, or demonstrate the PWP amendment submittal materials have been available for public review, including environmental information on the amendment necessary to enable the Commission to determine the consistency of the amendment with the Chapter 3 policies of the Coastal Act and/or the certified LCP, as applicable. Where the Executive Director determines it is not feasible to distribute the PWP amendment submittal materials and/or relevant environmental information due to the size or volume of the documents, or because of the costs of such distribution, the Executive Director shall provide notice to interested persons of the location of the environmental documents which are available for review, and a list of those documents. The PWP amendment materials and relevant environmental information shall be distributed or made available to the public prior to public hearing on the plan, and the Commission shall provide the opportunity for public comment in response to the information prior to the close of the public hearing on the plan.

6.6.3 Commission Rejection of Application for PWP Amendment

An application for an amendment to the PWP may be rejected if, in the opinion of the Executive Director of the Commission, the proposed PWP amendment would lessen or avoid the intended effect, or any conditions, of the certified PWP. The determination by the Executive Director to reject an amendment application shall be transmitted, in writing, to the applicant with an explanation of the reasons for such rejection.

6.6.4 Commission Acceptance/Process of Application for Minor Amendment

Design modifications and/or changed site conditions which may substantially deviate from the scope and/or conditions documented in the approved TREP/PWP, but that do not result in significant new impacts, and/or result in impacts that are addressed with adopted TREP/PWP policies and implementation measures may be subject to a minor PWP amendment.

Where an application for an amendment to a PWP is accepted, the Executive Director shall determine whether the proposed amendment is minor in nature. If the Executive Director determines the proposed amendment is minor in nature, notice of such determination shall be mailed to the Commission and to all parties the Executive Director knows or has reason to know may be interested in the amendment. If no written objection to the proposed amendment is received in the Commission office within fifteen (15) working days of the published notice, the proposed PWP amendment shall be deemed minor in nature, and shall be approved. The Executive Director shall notify the Commission of the approved minor PWP amendment at the next regular meeting of the Commission.

6.6.5 Commission Acceptance/Process of Application for Major Amendment

Design modifications and/or changed site conditions which substantially deviate from the scope and/or conditions documented in the approved TREP/PWP, and that have the potential to result in significant new impacts not addressed with adopted TREP/PWP policies and implementation measures may be subject to a major PWP amendment.

If the Executive Director determines the proposed PWP amendment is not minor, or if reasonable objection is made to the Executive Director's determination that the proposed PWP amendment is minor, or if the proposed amendment affects elements of the certified PWP adopted for purposes of protecting a coastal resource or coastal access, the amendment application will be processed as a regular amendment subject to the following procedures.

6.6.6 Notice and Hearing Procedures for Major Amendment

1. The Executive Director shall provide notice, and prepare and make available a staff report for the Commission, SANDAG/Caltrans, any affected local government, any persons who participated in the Commission hearings for review of the public works plan, and any other persons known or thought to be interested in the proposed public works plan amendment of the acceptance of the amendment application.
2. The Commission shall hold a hearing on the proposed PWP amendment no later than sixty (60) calendar days following the day the PWP amendment application is deemed "complete". If the Commission fails to act upon the PWP amendment on or before the hearing deadline, the PWP amendment shall be deemed certified. The hearing deadline may be extended if, on or before the hearing deadline, the Commission extends for good cause the hearing deadline for a period not to exceed one year from the original hearing deadline as established by the date the PWP amendment application was deemed complete.

6.6.6.1 Public Works Plan Amendment in Areas without a Certified LCP

1. Where PWP amendment review occurs prior to certification of a LCP, SANDAG/Caltrans may submit the PWP amendment to the Commission for review and certification. Approval of a PWP amendment by the Commission shall be accompanied by specific written findings that:
2. The development is in conformity with Chapter 3 of the California Coastal
3. That there are no feasible alternatives or feasible mitigation measures, as provided in CEQA, available that would substantially lessen any significant adverse impact that the proposed amendment may have on the environment.

6.6.6.2 Public Works Plan Amendment in Areas with a Certified LCP

1. Where PWP amendment review follows certification of a LCP and if a proposed PWP amendment does not require an amendment to the LCP pursuant to Public Resources Code Section 30515, SANDAG/Caltrans may submit the PWP amendment to the Commission for review and certification. Commission review shall be undertaken only after consultation with the affected local government who may recommend modifications necessary for the proposed PWP amendment to adequately carry out the certified local coastal program.
    a. At least 10 working days prior to the first public hearing on a proposed PWP amendment directly affecting a portion of the coastal zone for which a LCP has been certified by the Commission, the Executive Director of the Commission shall direct the Commission staff to consult with the affected local government with respect to the impact of the proposed PWP amendment on the coastal zone and on the certified LCP; the results of such consultation shall be reported to the Commission at the first public hearing on the proposed PWP amendment.
    b. At least 5 working days prior to transmitting a written recommendation on the proposed PWP amendment to the Commission, the Executive Director shall request the affected local government(s) transmit to the Commission its determination as to whether the proposed PWP amendment is in conformity with the certified LCP in the jurisdiction(s) affected by the proposed PWP amendment.
    c. The affected local government may, within its discretion, transmit its determination as to the conformity of the proposed PWP amendment with the LCP, in writing to the Commission prior to the Commission's vote on the proposed PWP amendment, and may

include any recommended modifications of the proposed PWP amendment that would conform it to the LCP; a local government may also indicate any proposed amendments to its LCP that would be necessary to accommodate the proposed PWP amendment.

d. Approval of a PWP amendment by the Commission shall be accompanied by specific factual findings supporting the conclusion that the PWP amendment, as approved, is in conformity with the certified LCP in jurisdictions affected by the proposed public works plan amendment.

6.6.7 Consolidated Review of PWP Amendment and Project-Specific NOID

If a proposed project intended to be undertaken pursuant to a PWP amendment is submitted to the Commission for a NOID concurrent with the submittal of a PWP amendment, the Commission shall review the project and the PWP amendment concurrently, and shall, if the project NOID is consistent with applicable Chapter 3 policies of the Coastal Act, approve the project as an integral component of the PWP amendment. The Commission may require conditions, where necessary, to bring the project into conformance with the Coastal Act.

6.7 EMERGENCY AUTHORIZATIONS

Definition of Emergency. For the purpose of this section, the term "emergency" means: A sudden unexpected occurrence demanding immediate action to prevent or mitigate loss or damage to life, health, property or essential public services.

6.7.1 Emergency Development in Areas Outside of the Commission's Retained Jurisdiction

1. **SANDAG/Caltrans Director Authority:** Where immediate action by SANDAG/Caltrans is required to protect life and property within the TREP/PWP area from imminent danger, or to restore, repair, or maintain rail or freeway right-of-way, utilities, or services destroyed, damaged, or interrupted by natural disaster, serious accident, or in other cases of an emergency, the SANDAG/Caltrans director may authorize emergency development on TREP/PWP area outside of the Commission's permit jurisdiction area in compliance with this section. Emergency work within areas subject to the Commission's permit jurisdiction is addressed in Section 6.7.1.
2. **Extreme Emergency Requiring Immediate Action:** If an emergency is so extreme it does not allow time for the written requests, authorizations, and coordination described in this section, SANDAG/Caltrans personnel or other authorized persons undertaking any emergency development shall adhere as closely as reasonably possible to the written request, authorization, and coordination portions of these procedures.
3. **Authorization of Emergency Development:** SANDAG/Caltrans may undertake emergency development in the TREP/PWP area if it is found that:
   a. Immediate action by the SANDAG/Caltrans is required to protect life and property from imminent danger, or to restore, repair, or maintain university property, utilities, or services destroyed, damaged, or interrupted by natural disaster, serious accident, or in other cases of emergency;
   b. The emergency requires action more quickly than could occur through the TREP/PWP normal development review procedures, and the emergency development can and will be completed within 30 days unless otherwise specified in the emergency authorization;

c. Public comment on the emergency development has been reviewed, if time allows;

d. SANDAG/Caltrans has coordinated with planning staff in the South Coast District office of Commission and/or the Executive Director pursuant to as much as feasible;

e. The emergency development proposed is the minimum necessary to address the emergency and, is the least environmentally damaging temporary alternative for addressing the emergency; and

f. The emergency development proposed would be consistent with the TREP/PWP as much as feasible and/or would not impede attainment of TREP/PWP requirements following completion of the emergency development.

4. **Notice of Emergency Development Authorization:** No later than 3 days of the occurrence of the disaster or the discovery of the danger, SANDAG/Caltrans shall provide the Executive Director of the Commission with at least telephone notice of the type and location of the emergency action taken. As soon as possible and no later than 7 days after the emergency, SANDAG/Caltrans shall submit, for information purposes only, a written Notice of Emergency Development Authorization to the executive director.

5. **Development authorized Pursuant to the Notice of Emergency Development Authorization:** Emergency development authorized pursuant to this Section is subject to the following conditions:

   a. Emergency development must be completed within 30 days and the development is considered temporary unless it is subsequently authorized through regular TREP/PWP or coastal development permit review procedures, which review must commence within ninety (90) days of the emergency authorization. Issuance of an emergency authorization shall not constitute an entitlement to the erection of permanent development or structures

   b. Development authorized through the emergency process must be removed and the affected area restored if a development project authorization has not been received within one year of authorization of the emergency development. If not so authorized, the emergency development, or unauthorized portion thereof, shall be removed and the affected area restored.

6.7.2 Emergency Development in Areas within the Commission's Permit Jurisdiction

1. In the event of an emergency necessitating emergency development on land on which the Commission retains permit jurisdiction the procedures of this subsection shall apply.

   a. SANDAG/Caltrans shall apply for an emergency permit to the executive director, by letter if time allows, or by telephone or in person if time does not allow. All processing of the proposed emergency permit shall be in accordance with California Code of Regulations, Title 14 Sections 13136-13143.

   b. Where immediate action by SANDAG/Caltrans is required to protect life and public property from imminent danger or to restore, repair, or maintain public works, utilities, or services damaged or interrupted by natural disaster or other emergency, the requirement for obtaining an emergency permit may be waived, in accordance with Section 30611 of the Coastal Act; provided that SANDAG/Caltrans shall comply with the requirements of Section 30611. SANDAG/Caltrans shall notify the Executive Director of the type and location of the emergency work within 3 days of the disaster or discovery of the danger, whichever comes first. This subsection does not authorize erection of any permanent structure valued at more than $25,000. Within 7 days of taking action, SANDAG/Caltrans

shall notify the Executive Director in writing of the reasons why the action was taken and provide verification of compliance with the expenditure limits. SANDAG/Caltrans submittal to the Executive Director shall be reported to the Commission and otherwise processed in accordance with California Code of Regulations, Title 14 Section 13144.

6.8 MONITORING OF TREP/PWP DEVELOPMENT PROJECTS

The PWP development review procedures for project NOIDs contained in this Chapter will provide the vehicle to continuously track and evaluate TREP/PWP program and project implementation to ensure at program benefits, including benefits to coastal access and coastal resources, are balanced with or exceed program impacts through the year 2030 planning period. To further monitor TREP/PWP program and project implementation, the TREP/PWP includes a monitoring and reporting program which will provide yearly assessment and summary of information and updates to the Implementation Framework to document projects and associated mitigation requirements completed, and to assess cumulative phase impacts, benefits and available resource mitigation credits for future project and/or phase implementation. Should a circumstance arise where a yearly report determines unanticipated resource impacts have occurred or are greater than anticipated for any particular project phase identified in the TREP/PWP, SANDAG/Caltrans will be responsible for initiating additional projects pursuant to the appropriate procedures outlined in this Chapter to sufficiently balance program impacts and benefits, prior to initiating any development contained in a subsequent phase.

6.8.1 TREP/PWP Monitoring and Reporting Program

The project manager and/or other SANDAG/Caltrans personnel assigned responsibility to implement and/or monitor authorized development projects shall prepare an annual TREP/PWP monitoring report, commencing with approval of the TREP/PWP by the Commission, which includes a cumulative and calendar year summary of:

1. Status of TREP/PWP-authorized development project implementation for the year (status of any associated authorizations, funding, construction timeline, etc.), any associated phasing requirements, and summary of compliance with any applicable implementation measures and/or conditions placed on the authorized NOID
2. Status and summary of compliance with conditions for any continuing obligations from project authorizations in previous years.
3. Any emergency authorizations that occurred and summary of compliance with Section 6.7
4. Status of TREP/PWP-required improvements and other SANDAG/Caltrans commitments associated with the TREP/PWP Resource Enhancement Program
5. Any comments received on TREP/PWP implementation (project construction, condition compliance, etc)

The project manager or other responsible SANDAG/Caltrans personnel shall verify authorized project compliance with all applicable implementation measures and that all NOID conditions have been timely fulfilled. The project manager or other responsible SANDAG/Caltrans personnel shall update and maintain a current copy of the TREP/PWP Preliminary Phasing Plan, prepared and implemented pursuant to Section 6.2.1, as may be revised per the procedures contained in this chapter, and any other applicable documents and project plans demonstrating compliance with the TREP/PWP. SANDAG/Caltrans shall maintain a record of these annual monitoring reports and they shall be available for public review.

6.9 TREP/PWP FUNDING PLANS

6.9.1 Sources of Funding

With a diverse program of transportation, community and resource enhancement projects in the corridor, funding will come from a variety of sources including local, state, and federal governments. SANDAG and Caltrans will have primary responsibility for developing funding in order to ensure program implementation. While funding is certain to change over time, some of these funding grants and programs that may enable the implementation of this program are listed below.

6.9.1.1 Local

- *TransNet* One-Half Percent Local Sales Tax Revenues
- Environmental Mitigation Program (EMP)
- Transportation Development Act (TDA)
- Local Street and Road Gas Tax Subventions
- Local Street and Road General Fund and Other Revenues
- Toll Road Funding – debt financing backed by future HOT/Managed lane revenues

6.9.1.2 State

- State Transportation Improvement Program (STIP)
- State Transit Assistance (STA) Funds
- Proposition 1B Infrastructure Bonds
- Traffic Congestion Relief Program (TCRP) Funds
- State Highway Operations, and Preservation Program (SHOPP) and Maintenance and Operations Program Funds
- Future State/Federal Gas Tax or Equivalent Revenue Increases

6.9.1.3 Federal

- FTA Discretionary (Section 5309) Funds
- FTA Formula (Section 5307 and 5309) Funds
- Surface Transportation Program (STP) Funds
- Congestion Mitigation and Air Quality (CMAQ) Funds
- Miscellaneous Federal/State/Private/Other Capital Revenues
- American Recovery and Reinvestment Act – Federal Stimulus Bill

NORTH COAST CORRIDOR

TREP/PWP APPENDIX A – LOCAL COASTAL PROGRAM CONSISTENCY ANALYSIS MATRICES

July 2010 DRAFT

Caltrans

SANDAG

PARSONS BRINCKERHOFF

DUDEK

Kimley-Horn and Associates, Inc

APPENDIX A

LOCAL COASTAL PROGRAM CONSISTENCY MATRICES

1. City of San Diego
2. City of Del Mar
3. City of Encinitas
4. City of Carlsbad
5. City of Oceanside

LOCAL COASTAL PROGRAM CONSISTENCY MATRICES

INTRODUCTION

This Appendix includes a Local Coastal Program (LCP) Policy Consistency Analysis matrix for each city in the corridor with a certified LCP and potentially affected by the proposed TREP/PWP improvements. The matrices include an analysis of potential TREP/PWP consistency with each applicable LCP policy that could be affected by the proposed highway corridor improvements, and by those rail corridor improvements that would be subject to coastal development permit or public works plan requirements. For LOSSAN rail projects included in the TREP/PWP that improve the movement of freight and thus fall under the exclusive jurisdiction of Surface Transportation Board (STB), the LCP policy consistency analysis may provide guidance or background information for analyzing rail project consistency with the Coastal Act, as appropriate and applicable (see Chapter 1 of the TREP/PWP for additional discussion of LCP applicability to rail projects under the exclusive jurisdiction of STB).

The policy consistency analysis included in this Appendix contains a very preliminary review of the TREP/PWP's consistency with LCP policies, with liberal assessment of policies the TREP/PWP could potentially conflict with. This was done, in part, to ensure that the local jurisdictions are made aware of all of the policies for which SANDAG and Caltrans may conceivably request amendments. Further, the preliminary LCP consistency analysis has been completed before the preferred alternative for the I-5 NCC Project has been selected, and before environmental review has been completed. As such, with further analysis, it is expected that the TREP/PWP will be found consistent with many of the policies for which the TREP/PWP improvements have currently been identified as "potentially inconsistent".

1. City of San Diego

LCP COMMUNITY PLAN	PRELIMINARY CONSISTENCY REVIEW
NORTH CITY COASTAL LAND USE PLAN	
TORREY PINES	
COASTAL ACCESS	
Goals • To provide a balance between land use and circulation such as the elimination of heavy traffic through residential areas. • To limit encroachment on the incompatible elements of the circulation system such as motor vehicles, into open space park areas. • To develop realistic and immediate solutions to the existing circulation problems in the community resulting from additional growth and the possible closing of Camino Del Mar by the City of Del Mar • To encourage and support the development of a mass transportation system serving the San Diego region and specifically the Torrey Pines area. • To develop a system of bikeways, pedestrian ways and horse trails compatible with the open space goals and transportation system to allow for commuter and recreation desires. • To preserve and enhance the unique natural environment. • To provide facilities adequate to serve the community. LCP Specific Language • Pursue development of a transportation system including use of bus, light-rail, shuttle service and bicycles which will provide access to the ocean, commercial centers, and the university. Parking areas should be identified primarily inland; however, emphasis should not be placed on the automobile. Proposals • Continue the cooperative working relationship with the MTD Board and SANDAG in the planning and implementation of a fixed guideway system for San Diego. • Encourage the development of adjacent properties to be undertaken in a manner that is visibly and physically compatible with the natural environment.	*Potentially consistent - Highway/Rail.* The I-5 and LOSSAN NCC projects have been designed so as to improve pedestrian, bicycle, vehicular, and rail circulation in the City while affecting the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility, and to avoid, to the maximum extent feasible, sensitive and constrained areas and adjacent land uses in the City. The TREP/PWP's main purpose is to improve the existing and future traffic operations in the I-5 and LOSSAN north coast corridors to improve the safe and efficient regional movement of people and goods for current and future users. The proposed improvements would be designed to protect and enhance community character to the extent feasible. The proposed project would create and enhance features for an efficient and integrated transportation program by increasing rail, carpooling and public transit capacity along I-5 and rail within the City and corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. The project includes bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods and connect inland and coastal areas.
RECREATION AND VISITOR SERVICE FACILITIES	
Goals • Designate and preserve as open space the exceptional topography and ecosystem in this community, including Los Penasquitos Lagoon, Torrey Pines State Park Reserve areas, Crest Canyon, San Dieguito Valley, and the sandstone cliffs overlooking San Dieguito Valley.	*Potentially consistent – Highway.* The proposed project could result in minor development encroachment into ecological, open space, and park lands along the existing corridor. However,

LCP COMMUNITY PLAN	PRELIMINARY CONSISTENCY REVIEW
NORTH CITY COASTAL LAND USE PLAN	
• Encourage the restoration of the natural resources of Penasquitos Lagoon and the restoration of the San Dieguito Lagoon as a tidal estuary • Permit only those recreational activities which do not have a negative impact on lagoon ecosystems, or on the environment of the Torrey Pine tree. Proposal • Any future improvement to railway, highway embankments and bridges traversing the Los Penasquitos Lagoon and Marsh, should be designed and constructed to minimize their impact on the natural characteristic of the area. Particularly, the blockage of the Lagoon to tidal action and the disturbance of wildlife by rail and vehicular traffic should be considered.	impacts to adjacent landforms are minimized as the project improvements would be maintained primarily within existing ROWs, there would be no permanent adverse impact to current tidal circulation patterns or to wildlife corridors, and the project includes a no net loss standard for sensitive habitat areas and includes extensive mitigation measures to address potential impacts to special-status plant and wildlife species. Bridge design across the lagoon would also consider widening and/or lengthening to reduce fill and improve ecological lift, as feasible. *Potentially consistent – Rail.* As the proposed LOSSAN rail corridor program improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would avoid further encroachment in the lagoon. The LOSSAN rail corridor project would minimize and mitigate potential impacts to ESHA and wetlands within the coastal zone. In accordance with the LOSSAN rail design and development strategies, potential impacts would be mitigated pursuant to the Resource Enhancement Program. Bridge design across the lagoon would also consider widening and/or lengthening to reduce fill and improve ecological lift, as feasible.
Proposal • Protect the reserve extension and the Lagoon from encroaching peripheral developments by careful review of proposed development plans and proposed rezonings. • The high cliffs to the east of Los Penasquitos Lagoon across 1-5 should be protected from disfiguration by applying the HR Overlay Zone. Although this land is lying outside the Torrey Pines community, development of these lands would have a visual and environmental effect on the surrounding area • Any future improvements to railway, highway embankments and bicycles traversing the Los penasquitos Lagoon and Marsh, should be designed and constructed to minimize their impact on the natural characteristic of the area. Particularly, the blockage of the Lagoon to tidal action and the disturbance of wildlife by rail and vehicular traffic	*Potentially consistent - Highway/Rail.* The existing location and orientation of the I-5 and rail facilities require that proposed improvements occur in lagoon areas. The proposed project could result in minor development encroachment into ecological, open space, and park lands along the existing corridors. However, impacts to adjacent landforms are minimized by developing within existing ROWs. Further, there would be no

LCP COMMUNITY PLAN	PRELIMINARY CONSISTENCY REVIEW
NORTH CITY COASTAL LAND USE PLAN	
should be considered.	permanent adverse impact to current tidal circulation patterns or to wildlife corridors, and the project includes a no net loss standard for sensitive habitat areas, including extensive mitigation measures to address potential impacts to specials-status plant and wildlife species. The project would not impact the cliffs to the east of Los Peñasquitos Lagoon across 1-5.
WATER AND MARINE RESOURCES	
Goal • To preserve and enhance the unique natural environment. Proposal • The value of the Lagoon as a wildlife habitat for many marine and terrestrial animals and plants should not be underemphasized. Because the entire subsystem is being encroached upon by urban development, efforts to assure its preservation should be undertaken as soon as practicable. • Widening or relocation of roads on the Lagoon perimeter should not encroach into the Lagoon. Plans for improvement of Carmel Valley Road and relocation of Sorrento Valley Road should be carefully and selectively adjusted to prevent filling or disturbance of Lagoon habitats. *Crest Canyon:* In order to ensure the protection of the Reserve, and to ensure that potential development results in minimum disturbance of existing or natural terrain and vegetation and does not create soil erosion, silting of lower slopes, slide damage, flooding problems, or severe cutting or scarring, grading which takes place in the designated buffer area should consider the criteria set forth as follows • The alteration should result in a minimum disturbance of existing or natural terrain, natural formation, and major vegetation. • Development should be subservient to the topography of the site rather than forcing the topography to be subservient to the development. • Development should ensure that steep slopes are not endangered by undue increases in weight or retained water to avoid slippage of steep banks. • Development should avoid any alteration of natural formations and restoration of the natural sites should be encouraged.	*Potentially consistent - Highway/Rail.* The proposed project could result in minor development encroachment into ecological, open space, and park lands along the existing facility. However, impacts to adjacent landforms are minimized as the project improvements would be maintained primarily within existing ROWs, there would be no permanent adverse impact to current tidal circulation patterns or to wildlife corridors, and a no net loss standard for sensitive habitat areas as well as extensive mitigation measures to address potential impacts to specials-status plant and wildlife species would preserve and enhance lagoon areas. The project would include Best Management Practices (BMPs) to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/minimized through the use of Construction Site BMPs while long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control

LCP COMMUNITY PLAN	PRELIMINARY CONSISTENCY REVIEW
NORTH CITY COASTAL LAND USE PLAN	
• Development should minimize the loss of vegetation. • Development should not create major interruptions of natural drainage patterns. Activities and development taking place in the buffer area should follow the following guidelines: • Ensure that all runoff during new construction is retained on site in settling ponds or is percolated into the soil on site; or includes construction of a runoff culvert to the lowlands with an adequate energy dissipator to prevent erosion and sedimentation into the lagoon. • Ensure that drainage from existing developed areas causes no erosion or sedimentation into the lagoon. • Ensure that runoff from existing developed areas does not carry toxins or excess nutrients into the lagoon channels. • Ensure that all on-site drainage patterns occur on or through areas designed to serve this function. • Minimize the disruption of existing natural features such as trees, and other vegetation, natural ground forms and view. • Blend proposed grading with the contours of adjacent properties. • Retain the maximum amount of native vegetation on the site and insure that all vegetation is done with natives, minimizing the need for irrigation. • Ensure that the value of the viewshed is protected by incorporating considerations into the design of new developments such as: • Compatibility of design with the desired developing character of the surrounding area. • Recognition of views, climate and the nature of outside activities in the design of exterior spaces. • Preservation of views and scenic vistas from unreasonable encroachment. • In areas of rugged topography, design of buildings to be subservient to the natural terrain. • Consideration of views from the lagoon and the freeway corridor in the landscape and structure design. LCP Specific Language Development adjacent to the Penasquitos Lagoon should consider the following guidelines: • Flood control measures should be designed to fit into the natural landscape rather than detract from it, by careful use of natural and man-made materials, and careful design of size and location. • All new development should minimize risks to life and property in areas with high geologic, flood, and fire hazards • Hydrologic, hydraulic and sedimentation computer models should be utilized to analyze existing and future flooding and sedimentation problems. It is proposed that maintaining be done through special funding sources from state, federal and private sources. Goal Encourage the restoration of the natural resources of Penasquitos Lagoon and the restoration of the San Dieguito	and treat stormwater runoff. The project would include landscaping with noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The highway project includes various improvements that would result in removal of existing vegetation and grading of existing landforms and construction of new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). However, the project would include measures to screen and soften views to/from the facilities to blend with the surrounding environment, including sound wall planting pockets and terraced retaining walls, which would be landscaped to reflect the visual character and goals of the City. Freeway landscaping would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover and, in less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist.

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Lagoon as a tidal estuary. Plan/LCP Specific Language • Marine resources should be maintained, enhanced and where feasible, restored, as recommended by the Coastal Conservancy restoration program. • Minimize adverse effects of waste water discharges and entrainment, control runoff, prevent depletion of ground water supplies and substantial interference with surface waterflow. • Encourage waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats and minimize alteration of natural streams. • Protect and enhance the aesthetic and ecological values of the Lagoon including its water quality, biological productivity and species diversity.	
ENVIRONMENTALLY SENSITIVE HABITAT AREAS	
LCP Specific Language • The canyon bottoms of Los Penasquitos and Lopez canyons, with their riparian habitat, should remain as open space. Similar habitat areas in side canyons also should be protected. Buffer Zones sufficient to protect these environmentally sensitive habitat areas should be established for development adjacent to these areas. The standard for evaluating development adjacent to such areas is the extent to which the proposed development maintains the functional capacity of such areas. Therefore, development permitted in a buffer zone should be limited to access paths, fences necessary to protect the habitat area, and similar developments which have beneficial effects or no significant adverse effects on the adjacent environmentally sensitive habitat areas. The extent of these buffer zones should be determined on criteria which includes a determination of: 1) the biological significance of adjacent buffer lands; 2) the sensitivity of species to disturbance; 3) the susceptibility of the buffer parcel to erosion; and 4) the type and scale of adjacent development proposed. • Development, alteration or grading of natural landforms should not occur on slopes greater than 25 percent in areas associated with the identified wildlife corridors in order to maintain the flora and fauna associated with this habitat area. This also will help to prevent erosion and protect the downstream riparian corridor and lagoon areas. • Mitigation measures should include, but not be limited to, buffer areas, drainage improvements to avoid adjacent runoff impacts to pool areas, adequate fencing and/or signing to avoid physical disruption, and appropriate setback of adjacent development to provide any necessary buffer. Goal • To preserve and enhance the unique natural environment. • To assess aesthetics, convenience and appropriateness equally in determining need for new development. • Preserve the natural areas of the City; the valleys, canyons, hillside and shoreline by encouraging development to	*Potentially inconsistent - Highway/Rail.* The I-5 highway NCC project could include encroachments on slopes having a 25% or greater natural gradient that would result in the loss of open space and sensitive resources. However, appropriate mitigation would be incorporated into the project to minimize the overall affect on the biological value of the open space and environmental resource areas. A draft EIR/EIS has been prepared for the I-5 NCC project that includes soils and geotechnical studies documenting the project will not adversely affect hillside or soil stability. The project would not impact the cliffs to the east of Los Peñasquitos Lagoon across 1-5. The proposed LOSSAN rail corridor program improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would avoid further encroachment in the lagoon. The LOSSAN rail corridor project would minimize and mitigate potential impacts to ESHAs within the coastal zone. In accordance with the LOSSAN rail design and

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respect a vanishing resource. Proposals • The high cliffs to the east of penasquitos Lagoon across 1-5 should be protected from disfiguration by applying the HR OVerlay Zone. • Maintain the character of the undeveloped valleys, canyons and hillsides. • Valleys and canyons should not be considered as right-of-way. LCP Specific Language • Environmentally sensitive habitat areas should be protected against any significant disruption of habitat values, and only uses dependent on and compatible with such resources should be allowed within such areas. Grading should be minimized, and allowed only when absolutely necessary at which time special consideration of development controls, manufactured hillsides, which reproduce as closely as possible the undisturbed landscape and hillside, and replanting with natural vegetation should be pursued. • Protect and enhance areas adjacent to environmentally sensitive habitat areas and parks and recreation areas, by utilizing Park Sensitive Development guidelines. These guidelines should follow the criteria listed below: • The filling of lateral canyons and grading over canyon rims should be minimized except in those few areas not visible from the canyon floor. "Promontories" and canyon rims that are visible from the canyon floor may be developed when suitable landscape screening is provided after thorough design review. This review process can be accomplished on slopes of 25 percent or greater and by use of the Planned Residential Development (PRD) procedure. Both of these methods will result in substantial slope areas being placed in open space easements, or dedicated to the City when adjacent to regionally significant park or open space areas. • Public access to canyon rims and views should be provided at suitable locations in the form of paths, scenic overlooks and streets. • Grading on ridges should be kept to a minimum. Where grading is feasible, a sculptured grading technique should be used to blend slopes with natural land contours. Graded areas should be built upon or planted rapidly in accordance with the City's land development ordinance. These measures should preclude the erosion of exposed slopes and subsequent erosion and siltation of natural drainage systems. • Any recontoured slopes should be stabilized with appropriate plant materials to help re-establish the natural biotic systems. • Development should be sited and designed to prevent impacts which would significantly degrade environmentally sensitive habitat areas. • Only low-profile, dwellings should be allowed near the canyon rims. Such dwellings should be sensitively designed to fit with the hillside and not be visually prominent from the canyon floor. • Design of dwelling units should stress a blending of architecture with the natural terrain. Architectural shapes, bulk,	development strategies, potential impacts to plant communities would be fully mitigated pursuant to the coastal resource enhancement program. The highway and rail projects would include BMPs to address potential water quality impacts during the construction and operational phases of the project. In addition, project BMPs would be included to control and treat stormwater runoff. Although the proposed highway and rail projects would result in minor development encroachment into ecological, open space, and park lands, in which it may not be feasible to completely avoid, potentially inconsistent with the permitted uses in this policy, the projects do include a no net loss standard for sensitive habitat areas and include extensive mitigation measures to address potential impacts to specials-status plan and wildlife species. A number of archaeological sites that initially were within the I-5 highway project's area of potential effect for cultural resources fell out as the highway project was redesigned such that the areas would be completely avoided. Only two archaeological sites have been identified that could potentially be adversely affected by the project due to soundwall construction should they be built. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources.

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color, materials, and landscaping should be carefully chosen and respect the physical constraints of the land. • Use of the Planned Development procedures are encouraged to minimize grading and to preserve the natural environment. • Development of land underlain by the Ardath Shale of similar formations (which are often unstable and not suitable for building sites) should be avoided, unless specific engineering studies indicate that potential problems can be mitigated, and that mitigation procedures result in the best overall solutions to the problem. • Appropriate mitigation measures should be applied to archaeological sites found in the area. Where development would adversely impact archaeological or paleontological resources, reasonable mitigation measures will be required. This proposal can be implemented by requiring thorough archaeological surveys prior to the approval of rezonings and subdivision maps.	The proposed rail improvements would also include design refinements or alignments to avoid or minimize impacts to cultural resources. As part of future environmental review for specific rail projects, specific mitigation measures would be identified and evaluated to address each specific rail project.
HAZARDS	
Goal • Encourage the development of adjacent properties to be undertaken in a manner that is visibly and physically compatible with the natural environment. Proposals • Restrict development in Sorrento Valley from further infringement on the Penasquitos Lagoon ecosystem.	*Potentially inconsistent - Highway/Rail.* See above discussion.
LOCATING AND PLANNING NEW DEVELOPMENT	
Goal • To preserve and enhance the unique natural environment. • To assess aesthetics, convenience and appropriateness equally in determining need for new development. Proposals • Developments should follow the natural contour of the land whenever possible. LCP Specific Language • New development should first be located adjacent to developed areas able to accommodate it, and where it will not have significant adverse effects on coastal resources. • New development should be regulated to assure that it has recreational and commercial facilities, transportation options, and on-site parking.	*Potentially consistent - Highway/Rail.* The proposed highway and rail projects could result in minor development encroachment into adjacent landforms along the existing highway and rail facilities. However, impacts would be minimized as the project improvements would be maintained primarily within existing ROWs. The project would serve to improve public access to coastal and inland recreational use areas. Furthermore, pedestrian bridges and improved at-grade crossings along the LOSSAN rail corridor would provide safe and convenient pedestrian and bicycle crossings over the tracks, better connecting communities to coastal resources.
VISUAL RESOURCES AND SPECIAL COMMUNITIES	
Goal • To preserve and enhance the unique natural beauty and amenities of the Torrey Pines community.	*Potentially consistent – Highway.* The project would not substantially affect views of existing open

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Proposals • Points of visual relief should be developed in the urban landscape through the use of open spaces and landscaping, building setbacks, building materials, location of public facilities, and street and right-of-way design maintenance. • The distinct areas of the community should be protected from intrusion and encroachment of incompatible uses. • Nuisances to adjacent uses should be minimized through the control of noise, odor, pollution, vibration and glare, and the screening of unaesthetic land uses. • Encourage the preservation of Torrey Pine trees in private as well as public areas. • Encourage the planting of Torrey Pine trees in roadways and other landscaped areas. LCP Specific Language • Protect scenic and visual qualities of coastal areas as a public resource. • Development should be designed to protect public 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 public areas. • Existing visual impacts from the freeways, or development within Sorrento Valley should be mitigated. Sign control and landscaping standards in addition to other techniques should be considered. • Guidelines for scale, height, and grading for future development should be followed.	spaces, lagoons, drainages or bluffs; however, throughout the City, the I-5 NCC project includes various improvements that could affect existing visual resources including removal of vegetation and grading of adjacent landforms, new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). Measures to minimize view impacts to natural features and visual resources include architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, and landscape screening of facility improvements. Generally, freeway landscaping would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. In addition, the project includes opportunities to underground existing utilities, where feasible, to reduce urbanized landscape/features, and provides opportunities for creating new community pocket parks or public open space areas. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing rail ROW, the

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	need for grading would be minimized and the potential for significant changes to the existing natural environment reduced. In addition, the footprint of existing bridges across the City's waterways would not be increased, and the existing bridge across Los Penasquitos could be replaced with a causeway structure that would increase the tidal flow and remove the embankment from the lagoon, while the tunnel option could allow for the removal of the bridge in the future.
NORTH CITY WEST	
FLOODPLAINS AND HILLSIDES	
• The installation of public and private improvements in designated open space areas should respect the natural environment to the maximum extent possible. • In order to promote preservation of the natural environment, development of either a public or private nature should not be allowed on lands designated for open space unless the proposed development is compatible with open space use. An inventory of the desirable natural features of all property within the study area together with alternative plans for the conservation of these amenities should be a prerequisite for development. • Protect environmentally sensitive habitat areas from significant disruption. • Design buffer areas to prevent impacts which would significantly degrade environmentally sensitive habitat areas and assure compatibility with the continuance of the habitat areas. • Permit development in buffer zones to access trails, fences necessary to protect the habitat area, and similar developments which have beneficial effects or not significant adverse effects on the adjacent environmentally sensitive habitat areas. • The criteria for establishing buffer zones includes a determination of: 1) the biological significance of adjacent buffer lands1 2) the sensitivity of species to disturbance; 3) the susceptibility of the buffer parcel to erosion; and 4) the type and scale of adjacent development proposed. • Protect and preserve significant habitat areas by buffer areas, drainage improvements to avoid adjacent runoff impacts to lagoon areas, adequate fencing and/or signing to avoid physical disruption, and appropriate setback of adjacent development to provide any necessary buffer.	*Potentially consistent - Highway/Rail.* The existing location and orientation of the I-5 highway and LOSSAN rail facilities occur in flood plain and hillside areas. However, the proposed improvements are consistent with policy provisions that address fill in the 100-year floodplain for roads and other public improvements as the proposed development would be capable of withstanding periodic flooding, and does not require the construction of offsite flood protective works. The project would be designed to maintain natural buffers between the corridors and adjacent land uses to the greatest extent feasible and would include a no net loss standard for habitat which would ensure wetland and ESHA resources are not significantly impacted. The improvements would minimize potential impacts to ground, surface and ocean water quality during all phases and would potentially enhance long-term water quality in the corridor through use of BMPs to address potential water quality impacts

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	during the construction and operational phases of the project, which would ensure the project is designed so as not to contribute to increased sediment loading of adjacent wetland/riparian areas.
HAZARDS	
Goals • To establish a balanced transportation system which is used as a tool for shaping the urban environment.	*Potentially consistent - Highway/Rail.* The TREP/PWP's main intent is to improve the existing and future I-5 traffic and LOSSAN rail operations in the north coast corridor to ensure the safe and efficient regional movement of people and goods. The TREP/PWP would protect and enhance community character with sensitive design and community enhancement features, and would result in an efficient and integrated transportation program by increasing rail, carpooling and public transit capacity within the City and corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. The project includes bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods and connect inland and coastal areas.
LOCATING AND PLANNING NEW DEVELOPMENT	
• All new development areas should be in close proximity to existing developed areas with adequate public services where no significant adverse effects on coastal resources will occur, or will be mitigated. • New development should 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. *Archaeological* • Sites considered by a project archaeologist to be of sufficient significance will be submitted to The City of San Diego for possible designation as City Historical Landmarks. Sites which are, in the opinion of the project archaeologist, eligible for nomination to the National Register of Historic Places, should be so nominated. These actions will become part of the conditions of project approval. • Significant archaeological resources located on site should be preserved either intact underground by incorporating them into local dedicated open space areas or by providing for professional salvage operations. Preservation is	*Potentially consistent – Highway.* The I-5 NCC project includes improvements to an existing facility and is designed to occur within the ROW to the greatest extent feasible. A draft EIR/EIS has been prepared for the I-5 NCC project that includes soils and geotechnical studies documenting the project will not adversely affect hillside or soil stability. A number of archaeological sites that initially were within the project's area of potential effect for cultural resources fell out as the project was redesigned such that the areas would be completely avoided. Only two archaeological sites

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usually preferable to salvage for the mitigation of impacts to archaeological resources by a project. Preservation permits future study of the resources with methods and techniques not yet developed, and may provide answers to questions which are yet to be raised. Salvage operations should include coordination between professional archaeologists, college or university classes, archaeological and historical societies, museums, and interested laymen capable of assisting in salvage work under the supervision of qualified professionals. • All field work, reports, recordation and curation of archaeological and historical resources shall be, as a minimum, in accordance with current standards in the City and County for such work, and under the supervision of qualified professionals.	have been identified that could potentially be adversely affected by the project due to soundwall construction, should they be built. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources. *Potentially consistent – Rail.* The proposed LOSSAN rail improvements could affect a number of known archaeological sites. However, the vast majority of conceptual rail alignment options are within or along existing rail transportation corridors or in deep tunnels, which would reduce the potential for adverse affects. Avoidance and mitigation strategies would be applied in the project-level analyses.
PUBLIC ACCESS	
• In order to promote North City West as a balanced community, a balanced transportation system must be included in initial construction of North City West. Such a system would assure mobility and access to all parts of the community for all residents and therefore facilitate a social balance. • In order to promote self containment and community identity, transportation systems must be designed to complement the planning concept and land use. The community should not be designed around the transportation system but with it. Major transportation systems should be integrated into the land form as naturally as possible; they should support neighborhoods, and avoid any artificial disruption or division of geographical units. • In order to promote preservation of the natural environment, transportation facilities should be regarded as an integral part of the landscape in which they are sited. They must be something more than the standard provision of a surface for moving cars or guiding mass transit vehicles. It must be kept in mind that corridors should be conceived of as "space" and not as a "line". When the requirements for, continuity, integrity and articulation are met, transportation facilities will merge with the natural landscape. • In order to promote realistic phasing of development, the precise plan for each development unit must include a complete circulation system which relates to the total North City West circulation system. Transportation is an	*Potentially consistent - Highway/Rail.* The I-5 and LOSSAN NCC projects have been designed so as to improve pedestrian, bicycle, rail and vehicular circulation in the City and throughout the corridor while affecting the minimum amount of land required to meet operational requirements, and avoiding, to the maximum extent feasible, sensitive and constrained areas and adjacent land uses in the City. The TREP/PWP would create and enhance features for an efficient and integrated transportation program by increasing rail, carpooling and public transit capacity along I-5 and

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important factor in catalyzing urbanization and therefore, it should be carefully coordinated with land use planning, public facilities and services, and the public investments necessary to support the development of the North City West community. • Provide separate systems for pedestrian and bicycle traffic. • Community mass transit system will connect individual neighborhoods with the town center, industrial/office park and high school. • Future transportation terminals and metropolitan area transit service are facilitated by the land use arrangement. • In order to promote a balanced network, dependence on the private automobile as the dominant mode of transportation must be reduced by developing an integrated system of pedestrian, bicycle, local transit and automobile facilities. The first step in the implementation of a balanced circulation system is coordinated land use and transportation planning to provide adequate rights-of-way followed by public commitment to finance such systems. • The Regional Express and Subregional system is proposed to operate on freeways and/or major streets. Design criteria should provide for the acquisition of at least two lanes for exclusive transit use. These lanes should initially be used by buses but could be converted for use by fixed guideway systems as the need arises. • The regional express system is proposed to operate on Interstate 5 and State Highway 56 connecting North City West with downtown San Diego, Oceanside and points east. Initial service could be provided by buses sharing freeway lanes with automobiles, to be replaced at a later date by exclusive bus lanes. Future service may be provided by a fixed guideway system. • The subregional system is proposed to provide local bus service from the North City West Town Center to Del Mar, Torrey Pines State Park., Sorrento Valley, UCSD, University City and La Jolla. • Proposed transportation systems should take into consideration neighboring amenities to prevent encroachment into environmentally sensitive areas. • Evaluation of public transportation systems should be required with approval of major new developments to mitigate the impacts of such developments upon the auto-oriented circulation system, and thereby mitigate potential environmental impacts. • Establish alternative transportation modes for public access to the shoreline, particularly to be considered and implemented during peak use periods and the summer months, as suggested by the SANDAG Coastal Access Report of 1978. • Develop a facilities benefit assessment program for North City West that will include access considerations in the total financial package. • Pursue development of a system of bike trails that will connect major activity areas such as the university to the town center, the proposed commercial center in North City West, and the recreational centers of the area, with a focus on the ocean and natural scenic corridors. • Pursue development of a transportation system including use of bus, light rail, shuttle service and bicycles which	rail lines within the City and corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. The project includes bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods and connect inland and coastal areas. The project would enhance coastal access by reducing congestion, incentivizing high occupancy vehicle and transit options, and increasing rail service. In addition, the project would enhance pedestrian circulation and bicycle opportunities to coastal and inland recreation use areas.

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will provide access to the ocean, commercial centers, and the university. Parking areas should be identified primarily inland, however, emphasis should not be placed on the automobile. • Pursue development of alternative transportation systems during the earliest stages of development of North City West to eliminate unnecessary traffic congestion and encourage the use of public transit and other transportation modes by future residents. • Pursue expansion of existing bike paths to include Cannel Valley Road and Sorrento Valley Road. • Coordinate with SANDAG to expand the -Bikes on Buses" program to provide bicycle rack service to include both Sorrento Valley and Carmel Valley roads leading into North City West.	
WATER AND MARINE RESOURCES	
• Preparation of a drainage plan for the precise plan area in which a development project is located is currently a condition of all development in the North City West community as mandated by the City Council ordinance which forms the North City West plan's district. Enforcement of this ordinance will assure drainage and runoff analysis and mitigation proposals at a level of detail sufficient to arrest erosion and siltation impacts. • Construct detention basins to control rainfall runoff from NCW under ultimate development conditions. • Control sediment runoff during construction by limiting grading activities and by vegetation of construction slopes. In addition, detention or desilting basins should be located downstream of construction activities to serve as back-up control. • Do not grade slopes during the rainy season between late fall and early spring of each year and seed exposed slopes before the mid winter season of each year.	*Potentially consistent - Highway/Rail.* The proposed improvements would include BMPs to address potential water quality impacts during the construction and operational phases of the projects. Short term potential impacts to water quality during the construction phase would be prevented/minimized through the use of Construction Site BMPs while long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff. The projects would also include landscaping with noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist.
HAZARDS	
Incorporate the "North City West Drainage Study," by Leeds, Hill and Jewett, Inc., as a means to satisfy the drainage control requirements as they affect the Carmel Valley and Penasquitos drainage systems located within the Coastal Zone as identified by AB 2216 (1980)	*Potentially consistent - Highway/Rail.* The proposed improvements could affect natural landform as a result of new cut slopes, fill slopes, bridge structures, traffic movement and retaining walls. However, construction of treatment basins,

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	swales, and other design features would control runoff, erosion, and sedimentation to the extent practicable, and immediate plant cover on cut/fill slopes would be compatible with surrounding landforms. Caltrans and SANDAG would coordinate with the City and responsible agencies as required to ensure potential impacts from runoff and erosion were minimized and/or mitigated to the maximum extent feasible.
MIRA MESA	
Goals • Encourage the preservation and enhancement of the natural features of the Mira Mesa area, particularly the canyons and unique natural features. • Provide an efficient transportation system which includes and serves multiple modes of travel (transit, auto, bicycle, pedestrian and equestrian) both within the community and the City at large.	*Potentially consistent - Highway/Rail.* Encroachments on slopes having a 25% or greater natural gradient could result in the loss of open space and sensitive resources. However, project encroachments would be minimal within the Mira Mesa area, and appropriate mitigation would be incorporated to minimize the overall affect on the biological value of the open space and environmental resources areas. Furthermore, the proposed improvements along the I-5 and rail corridors include reconfiguring interchanges and at-grade rail crossings to allow for increased traffic and pedestrian flow. The TREP/PWP also includes community enhancement features that would provide and/or improve pedestrian and bicycle facilities, provide linkages, and improvements to public transit centers and recreational facilities Caltrans and SANDAG would coordinate with the City and/or responsible agencies as required to ensure potential impacts to environmentally sensitive resources were minimized and/or mitigated to the maximum extent feasible.
PUBLIC ACCESS	
• Regard transportation facilities as an integral part of the landscape in which they are sited.	*Potentially consistent - Highway/Rail.* The

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• Minimize areas of conflict between pedestrians, bicycles and vehicular traffic. • Minimize the environmental impact of street construction.	TREP/PWP would further the community goal of developing a balanced transportation system that is an integral part of the landscape in which it is sited. Improvements would generally occur within the existing I-5 and rail corridor ROWs to minimize potential environmental and community impacts to the extent feasible.
RECREATION AND VISITOR SERVICE FACILITIES	
• Encourage the preservation of Los Penasquitos Canyon in its natural state and discourage any use that would adversely affect it, except a reasonable number of pedestrian access points, rest areas and/or other compatible facilities. • Carefully plan for access and parking relating to Los Penasquitos Canyon so that it can be preserved in a rural setting and so as to minimize potential conflicts. • Discourage any use of Penasquitos Canyon that would be incompatible with the natural ecosystem and its eventual use as a park. • Encourage the preservation of the unique natural resources of Penasquitos Canyon. • Development will accommodate recreational activities compatible and in harmony with the natural character of the Preserve	*Potentially consistent - Highway/Rail.* The TREP/PWP would improve pedestrian access to natural areas in the Preserve via trail and bicycle connections, consistent with this policy. Proposed highway improvements would occur generally within existing ROW and designed to minimize encroachments into natural areas to the greatest extent feasible.
WATER AND MARINE RESOURCES	
• Encourage the preservation and enhancement of the natural features of the Mira Mesa area, particularly the canyons and unique natural features. • Any fill slope should be stabilized with native plant materials to help re-establish the natural biotic systems of flora and fauna. • Encourage the preservation and protection of areas for the recreational activities characteristic of Mira Mesa by providing a network of trails for horseback riding, hiking, and bicycling; minimizing the cost of the trail system by utilizing drainage channels, flood plains, existing trails, public lands, and major utility rights-of-way.	*Potentially consistent - Highway/Rail.* The TREP/PWP would minimize and/or mitigate potential project affects on the natural features of the Mira Mesa area to the greatest extent feasible. Immediate plant cover on cut/fill slopes would be compatible with surrounding landscaping. Caltrans and SANDAG would also coordinate with the City and appropriate agencies as required to ensure recreational resource opportunities are maximized and pedestrian and bicycle trail connections provided where feasible.
ENVIRONMENTAL SENSITIVE HABITAT AREAS	
• To establish and preserve an open space system in perpetuity and guard against its encroachment. • To ensure a desirable, healthful, and comfortable environment for living while preserving Mira Mesa's natural resources • Preserve areas of high quality natural environment including wildlife, vegetation, and terrain	*Potentially inconsistent - Highway/Rail.* The TREP/PWP improvements could result in minor encroachments into open space and sensitive resource areas within Mira Mesa, and due to

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• Permit uses within the open space system which are compatible with the open space concept. • Ensure that all public improvements such as roads, drainage channels and utility services and all private lessee developments are definitely compatible with the objectives of the open space system. • Encourage the development of properties adjoining open space in a manner compatible with the natural environment. • Permit only compatible land uses within and adjacent to recreational areas, natural preserves and canyon rims. • Protect areas adjacent to major thoroughfares from pollutants of noise, exhaust, and light. • Encourage the preservation of the best natural features of the area in their natural state and avoid the creation of a totally urbanized landscape. • Encourage the protection of Mira Mesa's unique recreational and scenic resources from adjacent incompatible development. LCP Specific Language The canyon bottoms of Los Penasquitos and Lopez canyons, with their riparian habitat, should remain as open space. Similar habitat areas in side canyons also should be protected. "Buffer Zones" sufficient to protect these environmentally sensitive habitat areas should be established for development adjacent to these areas. The standard for evaluating development adjacent to such areas is the extent to which the proposed development maintains the functional capacity of such areas. Therefore, development permitted in a buffer zone should be limited to access paths, fences necessary to protect the habitat area, and similar developments which have beneficial effects to the urban upland or no significant adverse effects on the adjacent environmentally sensitive habitat areas. The extent of these buffer zones should be determined on criteria contained within the Guidelines for Wetlands and Environmentally Sensitive Habitat Areas. The criteria for establishing buffer zones includes a determination of: 1) the biological significance of adjacent lands; 2) the sensitivity of species to disturbance; 3) the susceptibility of the parcels to erosion; and 4) the type, scale and function of adjacent urban development proposed. No development, alteration or grading of natural landforms is to occur on slopes greater than 25 percent in areas associated with identified wildlife corridors. Exceptions to this condition may take place in the preparation of corridor crossing points on Calle Cristobal. This will also help to prevent erosion and protect the downstream riparian corridor and lagoon areas. Some minor slope modification may be allowed in areas where this is necessary in order to maintain an adequately sized corridor. The recontoured slopes will be replanted with native plants. Identified significant wildlife corridors between Los Penasquitos and Lopez canyons are to be preserved. Development adjacent to these corridors is to be designed to avoid impacts to wildlife use of these corridors. This would include the requirements of an adequate buffer, sufficient landscaping for proper screening, and the use of barriers such as fencing to protect corridors from human and animal encroachment of adjacent urban development. In addition, the corridors should utilize box culverts under Calle Cristobal that are adequately designed and sized for the passage of wildlife.	orientation of the existing highway and rail facilities, new construction may not be able to meet resource buffer requirements. However, these encroachments would not be expected to affect the overall biological value of the environmental resource areas. Furthermore, the proposed TREP/PWP includes a Resource Enhancement Program that would enhance and mitigate impacts to wetlands and ESHA with no net loss of resources within the corridor. Caltrans and SANDAG would coordinate with the City and/or wildlife agencies as required to ensure potential impacts are minimized and/or mitigated to the maximum extent feasible.

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Buffer areas, landscaping and/or barriers are to be designed and utilized in consultation with the California Department of Fish and Game. Development should not occur within any portion of the environmentally sensitive wetland (marsh) area at the confluence of Los Penasquitos and Lopez canyons. The extent of this wetland area should be determined by the seasonal presence and extent of water, the existence of hydrophytic plant species, and the extent of geological (depositional) material. Vernal pool areas should be preserved in compliance with the issuance of an individual Section 404 Permit and should be subject to mitigation measures determined adequate by the responsible agencies. Maintain or improve the natural biological function of the pools and provide maximum protection from abutting development, as well as provide educational opportunities for the community. Mitigation measures should include, but not be limited to, buffer areas, drainage improvements to avoid adjacent runoff impacts to pool areas, adequate fencing and/or signing to avoid physical disruption, and appropriate setback of adjacent development to provide the necessary buffer.	
HAZARDS	
• Grading over the rim of Los Penasquitos Canyon should be prohibited except in those few areas where it would not be visible from the canyon floor. • Future development should not be permitted that would visually intrude on the proposed park. Many "peninsulas· and canyon rims in this area that are visually prominent from the canyon floor should not be developed. Those rim areas that are found suitable for development should only be allowed to develop after thorough design review. This can be assured by application of Hillside Review (HR) overlay zoning to the area on the ridge adjacent to 25 percent or greater slopes as provided for in the zoning code, or by use of planned residential development • Where grading and canyon fill is feasible a more sculptured grading technique should be utilized to blend fill slopes with natural land contours • Wherever possible, public access to the canyon rim and view should be provided in the form of paths, scenic overlooks and streets • Steep hillsides and canyons allocated for open space should be generally protected and preserved in a natural state. However, where development is permitted, very low density urbanization (one unit per acre) should utilize natural features to enhance development and preserve areas of high scenic value. The control on grading can be implemented by placing all hillsides in Mira Mesa that qualify under Hillside Review (HR) overlay zoning controls or by requiring use of the Planned Residential Development procedure • Large scale grading should be followed by construction and landscaping as soon as practical. Any grading activity undertaken during the rainy season should have adequate safeguards against excessive erosion and damage to	*Potentially consistent -- Highway/Rail.* The TREP/PWP could result in project affects to natural landforms and may potentially increase both the amount of urban pollutants in runoff and the volume of runoff generated along the highway and rail corridors. However, the proposed projects would include BMPs and construction of treatment basins, swales, and other design features to control runoff, erosion, and sedimentation to the extent practicable, including immediate plant cover on cut/fill slopes that would be compatible with surrounding landforms. See also discussion above.

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adjacent property as determined by the City Engineer. Reseeding should be required on large scale grading within six months providing that water supply is adequate to germinate such reseeding or the normal rainy season will provide such germination. This proposal will require a change in the City's General Services Department and Fire Department policies which require weed removal by developers. LCP Specific Language The following recommendations are included to mitigate the impacts of siltation and urban runoff of development other than Planned Residential, Commercial or Industrial: • Development on areas adjacent to Los Penasquitos and Lopez canyons, including the ridge between the two canyons, shall minimize alteration of existing landforms by requiring construction to conform as closely as possible to the existing terrain. The following recommendations are included to mitigate the impacts of siltation and urban runoff of projects proposed under subdivision activities, Planned Residential Development, Planned Commercial Development or Planned Industrial Development. • No filling is to be permitted over the canyon rim on the south side of Los penasquitos Canyon. • Development is to be restricted on slopes that are adjacent to canyon bottoms. Development in those areas will provide an adequate buffer for wildlife, visual and erosion protection purposes. • Development on areas adjacent to Los Penasquitos and Lopez canyons, including the ridge between the two canyons, should minimize alteration of existing landforms by requiring construction to conform as closely as possible to the existing terrain. In all cases, development is to be concentrated in those areas where the natural landform is less than 15 percent slope. Some cut and placement of fill on slopes greater than 15 percent may be permitted only under the following conditions: • If the natural habitat (flora and fauna) values in these areas are found to be minimal, in comparison with other adjacent sites, and to the Penasquitos Coastal wetland values. • If the habitat function in these areas is found to be minimal to the support of habitat values in adjacent areas and to the Penasquitos Lagoon wetland habitat values. Evaluation of this factor will occur during individual project environmental review. • If the resulting slopes and buildable pads do not result in an increase in siltation or peak runoff rate as required in the grading plan and runoff control plan. • If the resulting buildable pad or fill slope on the north side of Lopez Canyon is not visible from a point located along the creek bed in Lopez Canyon that is nearest to the proposed development, except for the provision of necessary public facilities such as roads. • If the resulting fill slopes are contour graded to match as closely as possible the adjacent natural slopes. • If the buildable pad which results from the fill is adjacent to a natural landform with less than 15 percent slope.	

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• If the resulting finished grade of the buildable area is less than 15 percent. All slopes and disturbed areas should be provided with an irrigation system which will be used to promote the growth of plants that will protect the slopes against erosion. Cut and fill slopes are to be provided with a permanent irrigation system unless a licensed landscape architect demonstrates that permanent slope protection vegetation can be established with a temporary irrigation system adequate to establish an appropriate growth of annual plants. The developer is to be responsible for the installation. of the irrigation system. • Prior to development, a runoff control plan designed by a licensed engineer qualified in hydrology and hydraulics will have to be prepared which would assure no increase in peak runoff rate from the fully developed site over the greatest discharge that would occur from the existing undeveloped site as a result of the greatest intensity of rainfall expected during a six-hour period once every ten (10) years (10 year, six hour rainstorm). Runoff control should be accomplished by such means as on-site catchment basins, detention basins, and siltation traps along with energy dissipating measures at the terminus of storm drains, or any other measures found to be more effective than these. Drainage is not to be concentrated in one or a few locations. A number of drainage facilities are to be utilized to minimize the potential major runoff concentration that would result in adverse erosion conditions. Use of cluster type development should be utilized in order to limit the amount of impervious surfaces and associated increase in peak runoff. Runoff control plans are to be developed prior to tentative subdivision map approval, and should be conditioned as a part of that approval. • Special districts, Homeowners Associations, or other mechanisms should be established in new developments to provide the means for maintenance and repair of required runoff and erosion control facilities as well as for the maintenance of 'any irrigation systems. • Undeveloped slopes over 25 percent should be preserved as open space either through offers of dedications of permanent open space easements as a condition of future subdivisions or by any other means available. These offers would be recorded as restrictions against the subject property. The restrictions will also limit any alterations of landforms, removal of existing vegetation or the erection of structures of any type. Open space easements would protect the steeper slopes from erosion, preserve the area's scenic and visual amenities, and protect valuable native vegetation, and fauna related to the overall penasquitos Lagoon habitat. • Road standards should be maintained consistent with safety needs such as grade requirements and design speeds so that hillside roads may be adapted to the natural topography and constructed with minimum requirements for cut and fill. Narrow lanes, one-way streets, and split-level roads should be used whenever possible to minimize cut and fill and to maintain an appropriate scale in the development of sloped areas.	
VISUAL RESOURCES AND SPECIAL COMMUNITIES	
Goals • Minimize visual pollution by controlling location, size, design and lighting of outdoor signs. • Encourage the protection of Mira Mesa's unique recreational and scenic resources from adjacent incompatible	*Potentially consistent – Highway.* The I-5 NCC project could alter natural landforms as a result of new cut slopes, fill slopes, bridge structures, traffic movement and retaining/ sound walls. Visual

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development. LCP Specific Language • Development in the Mira Mesa area should preserve the scenic qualities of the surrounding coastal and canyon viewshed areas. Development within the viewshed of Sorrento Valley as well as development located near the south edge of Lopez Canyon that is visible from the canyon floor should be low profile and set back from the bluff edges to allow adequate landscaping to mitigate any visual impact upon the surrounding public viewshed. • Development near the south slopes of Los Penasquitos Canyon should maintain a low profile and be set back so as not to be visible from public viewshed areas located along the Los Penasquitos Creek streambed nearest to the proposed development. Streets serving development on the mesa should be located near the canyon edge with development located on the interior in order to maintain public views to the open space areas of Los Penasquitos Canyon. Turn outs and accessways to the Los Penasquitos Canyon should be provided north of Calle Cristobal. • Where grading occurs, a sculptured technique should be used to blend fill and cut slopes with natural land contours. Any fill slopes should be stabilized with appropriate native plant materials to help re-establish the natural biotic systems of flora and fauna. • Utilities should be placed underground in all new developments.	grading impacts will be reduced by erosion control measures including immediate plant cover on cut/fill slopes. Measures to reduce the visual affect of new walls, particularly those needed for noise attenuation will be mitigated to the greatest extent feasible by utilizing wall treatments emphasizing compatible texture, color and design elements to ensure aesthetically pleasing design. Significant views of inland and coastal recreational use areas would be maintained. Caltrans would also coordinate with the City and appropriate agencies as required to ensure potential site-specific impacts are minimized and/or mitigated to the maximum extent feasible. Undergrounding of existing utilities could occur, further improving the visual affect of the proposed project. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing facility corridor and/or improvement areas, the proposed improvements would minimize the need for any grading activities, thereby reducing the potential for any significant changes to the existing natural environment.
UNIVERSITY – LA JOLLA	
Goals • A balanced transportation system linking the entire community to all activity areas and to the San Diego metropolitan area must be achieved.	*Potentially consistent - Highway/Rail.* The I-5 NCC project would improve circulation along the I-5 corridor by increasing capacity and reducing congestion. Similarly, the LOSSAN rail corridor improvements would improve reliability, reduce travel times, and provide a viable modal alternative to single occupancy vehicles. The proposed TREP/PWP also includes bicycle and pedestrian

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	facility improvements, promotes carpooling, and increases public transit opportunities. Furthermore, Caltrans would coordinate with the City and appropriate agencies as required to ensure potential impacts to coastal resources were minimized and/or mitigated to the maximum extent possible.
TRANSPORTATION	
• Developments within La Jolla should not be permitted if they would adversely affect pedestrian safety or mobility or significantly increase congestion, pollution or noise. • Public transportation between La Jolla and the remainder of metropolitan San Diego should be improved.	*Potentially consistent - Highway/Rail.* See discussion above.
OPEN SPACE, PARKS, AND RECREATION	
• La Jolla's relationship to the sea should be maintained. • Existing physical and visual access to the shoreline and ocean should be protected and improved. 3. All forms of open space should be preserved where possible-beaches, parks, cliffs, scenic vistas, tidepools, coastal waters, and canyons 4. Visual attractiveness should be fostered. • New developments should not prevent or unduly restrict access to beaches or other recreational areas • Canyon lands in the Land Conservation Zone are ever developed they should be developed only at a very low residential density and with minimum cutting and filling. • Canyon lands in the Land Conservation Zone should be acquired and retained in their natural state. • If it becomes necessary to construct utility equipment or facilities in any park or open space area; all such facilities should be placed underground and the land returned to its natural state. All existing facilities should also be placed underground. • Street tree planting and beautification program should be promoted. Existing street trees should be protected against removal. • Means should be developed to prevent the destruction or removal of any tree the trunk of which exceeds six inches in diameter, whether situated on public or private property. Where removal of any such tree is unavoidable under the circumstances (e. g. a diseased tree), adequate replacements should be required.	*Potentially consistent - Highway/Rail.* The TREP/PWP improvements could result in minimal encroachments into open space and sensitive resource areas. However, the overall biological value of the open space and environmental resource areas would be protected and enhanced, where feasible, through appropriate mitigation. Existing physical and visual access to the shoreline and ocean, as well as to inland recreational resources, such as lagoons and canyons, would be maintained and enhanced, where feasible. Pedestrian and bicycle trail connections are proposed to enhance access to scenic open space areas. Furthermore, Caltrans and SANDAG would coordinate with the City and/or responsible agencies as required to ensure potential impacts to open space, park, and recreational areas were minimized and/or mitigated to the maximum extent feasible.
PUBLIC ACCESS	
Goal • All forms of open space should be preserved where possible; parks, cliffs, scenic vistas, tidepools, coastal, waters and canyons.	*Potentially consistent - Highway/Rail.* See discussion above

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• Provide maximum protection to the Torrey Pines Natural Preserve. • Only those public uses which can be accommodated without threat to the ecological integrity of the torrey pines should be permitted.	
RECREATION AND VISITOR-SERVING FACILITIES	
Goals • All forms of open space should be preserved where possible - beaches, parks, cliffs, scenic vistas, tidepools, coastal waters, canyons. • Visual attractiveness should be fostered. Proposals • New developments should not prevent or unduly restrict access to beaches or other recreational areas.	*Potentially consistent - Highway/Rail.* See discussion above.

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Executive Summary POLICIES 1. All development adjacent to open space areas shall be designed to reduce visual and development impacts. 2. Provide safe roadways for pedestrians, bicyclists and vehicular traffic, including traffic control measures and pedestrian crossings where necessary. 5. The construction of public projects shall avoid impacts to residential neighborhoods. 6. Public projects (utilities, roads, railroad, etc.) that cross or encroach into open space areas shall eliminate or avoid loss to biological resources, shall result in no net loss to wetlands, and shall be required to contribute to the restoration and enhancement of those open space areas. 8. Public mass transit service, including bus, light rail, and commuter rail should be provided to and through the Torrey Pines community.	*Potentially consistent - Highway/Rail.* The TREP/PWP improvements would enhance pedestrian, bicycle, and vehicular circulation, and improve rail service in the City. The projects would avoid, to the maximum extent feasible, sensitive and constrained areas and adjacent land uses in the City. The proposed TREP/PWP includes a no net loss standard for wetland and ESHA resources. The projects would improve the existing and future traffic and rail operations in the north coast corridor and provide for the safe and efficient regional movement of people and goods. Sensitive design and community enhancement features would reduce potential visual impacts, and minimize encroachments outside of existing ROW to the extent feasible. The TREP/PWP would create and enhance features for an efficient and integrated transportation program by increasing rail, carpooling and public transit capacity, and would provide multi-modal linkages for pedestrian and bicycle circulation through trail connections linking public transit centers, neighborhoods and coastal and inland recreational use areas.
RESOURCE MANAGEMENT AND OPEN SPACE ELEMENT	
Policies 1. Land uses adjacent to environmentally sensitive habitats shall not negatively impact those areas. 2. Development impacts to rare, threatened, endangered, or candidate species shall be minimized or eliminated. 3. No filling, clearing, grubbing, or other disturbance of biologically sensitive habitats shall be permitted without approved mitigation plans. 4. Coastal lagoons and estuaries that are designated and zoned open space shall remain undeveloped. 5. Public access in areas of environmentally sensitive habitats shall be limited to low intensity recreational, scientific, or	*Potentially inconsistent - Highway/Rail.* Due to the existing orientation of the highway and rail facilities, proposed improvements could result in minor encroachments into ecological, open space, and park lands, which is potentially inconsistent with this policy. However, the TREP/PWP would meet a no net loss standard for wetlands and environmentally sensitive habitat areas, and includes mitigation to address potential impacts to special-status plant and wildlife species.

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educational use. Access shall be controlled or confined to designated trails or paths, and no access shall be approved which results in disruption of habitat. 6. New development adjacent to and impacting biologically sensitive areas shall be responsible for the restoration and enhancement of that area. In particular, when mitigation areas are needed for public projects, the disturbed areas in Crest Canyon should be revegetated with Coastal Mixed Chaparral and Torrey Pines. 7. Riparian vegetation in channels through the Sorrento Valley industrial area shall be preserved in its natural state in order to maintain its vital wildlife habitat value. When vegetation removal is necessary for flood control, the required state and federal permits shall be obtained. 8. Preserve and enhance all open space and wildlife corridors (see Figure 6), especially those linking Los Peñasquitos Lagoon with Torrey Pines State Reserve Extension and the Carroll Canyon Creek Corridor. 9. Crest Canyon shall be left in its natural state in order to preserve those biologically sensitive habitats identified within this park. A small portion of the parkland located adjacent to Del Mar Heights Road and Durango Drive should accommodate some limited passive park development. 10. Construction or improvements of roadways adjacent to biologically sensitive areas or open space shall be designed to avoid impacts, especially in wetlands and wetland buffer areas. Protection of sensitive habitats through buffers, realignments and reduced development areas shall also be considered. 11. New development, both public and private, should incorporate site planning and design features that avoid or mitigate impacts to cultural resources. When sufficient plan flexibility does not permit avoiding construction on cultural resource sites, mitigation shall be designed in accordance with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission. 12. Maintain regulations that prohibit contaminated runoff from reaching any of the sensitive open space areas designated in this Plan. 13. Conditions of approval for all development that impacts adjacent open space areas should include restoration and enhancement measures for that particular area. 14. All Torrey Pine trees on public property should be preserved and protected. 15. Provide pedestrian/bicycle linkages so that all open space areas will be connected.	A number of archaeological sites that were initially identified within the highway's area of potential effect for cultural resources fell out as the project was redesigned such that the areas would be completely avoided. Only two archaeological sites have been identified that could potentially be adversely affected by the highway project due to soundwall construction. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measures would be implemented to ensure the project does not result in adverse impacts to cultural resources. The proposed rail improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize the need for excessive grading and landform modification that could otherwise impact cultural resources. Site-specific improvements would be designed to avoid or minimize impacts to cultural resources. As part of future environmental review for specific rail projects, additional site-specific mitigation measures would be identified to address potential affects. The improvements would also include BMPs to address potential water quality impacts during the construction and operational phases of the project, as well as to control and treat stormwater runoff. The project would include landscaping with noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas

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	of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The project includes removal of an existing culvert structure within the Carroll Canyon Creek Corridor which would enhance the hydrology and wildlife corridor of this area. The project would have no impacts on areas within Torrey Pines State Reserve.
SAN DIEGUITO LAGOON AND RIVER VALLEY	
Specific Proposals 1. New development or expansion of existing uses adjacent to the lagoon shall not encroach into or negatively impact this open space area. 2. The lagoon should be enlarged to enhance plant and animal habitats, and to create a sufficient tidal prism to ensure adequate water circulation and to keep the mouth of the river open. 4. Development adjacent to the lagoon should be designed to avoid sedimentation, erosion or other potential impacts that degrade the quality of the water resources, and should preserve existing public views. The following measures to reduce grading impacts should be utilized where appropriate: minimize grading during the rainy season, install sediment basins and/or energy dissipating structures, and ensure revegetation and stabilization of slopes before the onset of the rainy season. To reduce visual impacts, development should be low-profile and screened from view by landscaped buffers. 5. Within the 100-year floodplain fringe of the San Dieguito River, fill for roads and other public improvements and/or permanent structures will be allowed only if such development is consistent with uses allowed pursuant to the A-1-10 Zone and other existing zoning, is capable of withstanding periodic flooding, and does not require the construction of offsite flood protective works. The following requirements shall also be met: • Existing environmentally sensitive habitat areas will not be significantly affected, and, that as a condition of development, significant new riparian corridors will be planted and maintained to function as enhanced wildlife corridors. • The design of the development incorporates the findings and recommendations of both a site-specific and coastal watershed hydrologic study in order that the development either assures that there will be no increase in the peak	*Potentially inconsistent - Highway/Rail.* Due to the existing location and orientation of the I-5 and LOSSAN rail facilities, the improvements would occur in areas of the San Dieguito Lagoon and River Valley containing wetlands and riparian habitat, and potentially would result in direct impacts to coastal wetlands. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas

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runoff rate from the fully developed site, and neither significantly increase nor contributes to downstream bank erosion and sedimentation, including wetlands, lagoons, and other environmentally sensitive habitat areas. • There will be no significant adverse water quality impacts to downstream wetland, lagoon and other environmentally sensitive habitat areas. 6. Protect, preserve and enhance the variety of natural features within the San Dieguito River Valley including the floodplain, the open waters of the lagoon and river, wetlands, marshlands and uplands. 7. Maintain and enhance the experience of nature within the lagoon by screening present conflicting uses, prohibiting future conflicting uses, retaining natural areas and promoting an expanded water body within the lagoon.	within City waterways in the corridor. In addition, the TREP/PWP would be consistent with those policy provisions addressing fill in the 100-year floodplain for roads and other public improvements, as the proposed development is consistent with allowed uses identified within the zoning code, is capable of withstanding periodic flooding, and does not require the construction of offsite flood protective works. The improvements are designed to maintain natural buffers between the corridor and adjacent land uses to the greatest extent feasible. The TREP/PWP also includes a no net loss standard for potentially affected wetlands and ESHA. BMPs to minimize potential impacts to ground, surface and ocean water quality would be implemented during all phases of construction and operations and would potentially enhance long-term water quality in the corridor through reduced sediment loading of adjacent wetland/riparian areas.
TORREY PINES STATE RESERVE EXTENSION	
1. New development, both public and private, shall not encroach into or negatively impact the Reserve Extension. Adequate buffer areas and appropriate landscaped screening shall be provided and maintained between development and the Reserve Extension to avoid significant visual and erosion impacts from construction. 2. Both wildlife corridors (Portofino and Via Mar Valle) shall be preserved and enhanced to provide appropriate wildlife linkage to Los Peñasquitos Lagoon. 3. Future development adjacent to the Torrey Pines Reserve Extension area shall provide for adequate buffer areas. Development proposals shall provide adequate setbacks to avoid significant erosion, visual, or sediment impacts from construction. Setbacks also shall be provided to prevent the necessity of firebreaks being constructed on reserve property.	*Potentially consistent – Highway.* The I-5 NCC highway project would have no impacts on areas within Torrey Pines State Reserve. *Potentially consistent – Rail*. The proposed LOSSAN NCC rail facility track improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize substantial encroachment into adjacent open space areas, and would minimize the need for excessive grading and landform modification that could otherwise disrupt the natural character of the land,

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4. Landscaping of properties adjacent to the Extension shall not use invasive plant species. Landscaping adjacent to this area should use plant species naturally occurring in that area.	water, vegetative, and wildlife resources in the area, including areas within Torrey Pines State Reserve.
LOS PEÑASQUITOS LAGOON	
1. Development of new public facility and utility projects that traverse or impact Los Peñasquitos Lagoon should either be rerouted out of the lagoon, or be designed to minimize or eliminate impacts to the lagoon. Mitigation for these projects should include restoration and enhancement to the lagoon. 2. Any future improvements to the railroad, roads or utilities traversing Los Peñasquitos Lagoon shall be designed to enhance the health and ecological value of the lagoon, as recommended in the Los Peñasquitos Lagoon Enhancement Plan and Program. 3. Any improvements to roadways adjacent to or bordering the lagoon (Carmel Valley Road, Sorrento Valley Road, North Torrey Pines Road) shall not encroach within the wetland area of the lagoon, unless specifically authorized herein. 4. All wetland/wildlife corridor links to the lagoon including the links from Los Peñasquitos Canyon Preserve, Carroll Canyon and the Torrey Pines Reserve Extension area shall be enhanced and protected. 5. Plans for future removal or rerouting of the electrical utility lines that transect Los Peñasquitos Lagoon shall be given high priority. 6. Public access and educational opportunities shall be provided consistent with resource protection. 7. The lagoon mouth shall be opened regularly (or as recommended in the Los Peñasquitos Lagoon Restoration and Enhancement Plan) to enhance the health and ecological value of the lagoon. 8. Erosion and siltation control measures shall be required for all developments proposed within the total watershed of Los Peñasquitos Lagoon. 9. Any future changes in the design of the North Torrey Pines Road and bridge shall be designed such that the ecosystem of the lagoon is maintained and, if possible, enhanced. 10. Applicants for coastal development permits for projects located in the watershed of Los Peñasquitos Lagoon shall, in addition to meeting all other requirements, enter into an agreement with the City of San Diego and the State Coastal Conservancy as a condition of development approval to pay a Los Peñasquitos watershed restoration and enhancement fee to the Los Peñasquitos Lagoon Fund for restoration of the Los Peñasquitos Lagoon and watershed.	*Potentially inconsistent - Highway/Rail.* Due to the existing location and orientation of the I-5 and LOSSAN facilities, proposed improvements would result in minor development encroachments potentially resulting in direct impacts to areas of Los Peñasquitos Lagoon. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. The improvements are designed to maintain natural buffers between the corridor and adjacent land uses to the greatest extent feasible. An existing culvert structure within the Carroll Canyon Creek Corridor is proposed for removal, which could enhance the hydrology and wildlife corridor of this area. The highway improvements would have no impact on areas within Torrey Pines State Reserve, while

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	the proposed LOSSAN improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize substantial encroachment into adjacent open space areas, minimizing the need for excessive grading and landform modification that could otherwise disrupt the natural character of the Torrey Pines State Reserve. The TREP/PWP also includes undergrounding of utilities requiring relocation wherever feasible. Improvements to pedestrian and bicycle access to the lagoon area would occur via proposed trail and bicycle connections. BMPs to minimize potential impacts to ground, surface and ocean water quality would be implemented during all phases of construction and operations and would potentially enhance long-term water quality in the corridor through reduced sediment loading of adjacent wetland/riparian areas. In addition, the project includes a no net loss standard for potentially affected wetlands and ESHA.
CARROLL CANYON WETLAND/WILDLIFE CORRIDOR	
1. All new development proposed adjacent to this open space corridor shall incorporate the urban design guidelines located within the Industrial Element as appropriate. 2. New development proposed adjacent to this open space corridor shall not contribute to increased sediment loading of the wetland, disturbance of its habitat values, or otherwise impair the functional capacity of the wetland. 3. New development proposed adjacent to and impacting this open space corridor shall enhance and improve the habitat value of this system. 4. All mature trees and other significant existing vegetation in this system shall be protected, including the riparian	*Potentially inconsistent - Highway/Rail.* See discussion above regarding potential impacts to coastal wetlands within the City. The improvements are designed to maintain natural buffers between the corridor and adjacent land uses to the greatest extent feasible. An existing culvert structure within the Carroll Canyon Creek Corridor is proposed for removal, which could enhance the hydrology and wildlife corridor of this area.

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habitat located in the existing concrete-lined channels. 5. All new development proposed adjacent to this corridor shall submit a pedestrian/bicycle pathway plan, indicating the construction of their portion of the pathway consistent with the community-wide pathway system and the industrial development design guidelines contained in the Industrial Element. 6. Within the l00-year floodplain fringe of Sorrento Valley, fill for roads, public improvements, or other permanent structures will only be allowed if it can be shown that all of the following will be met: a. Existing environmentally sensitive habitat areas will not be significantly adversely affected. b. Increased erodible flood flow velocities will not occur. c. Areas to be filled do not create unplanned detention/siltation. d. Any loss or degrading of existing wildlife habitat areas will be appropriately mitigated. e. Increases in post-construction runoff and sediment above the ten-year storm frequency preconstruction condition, will be mitigated. f. Appropriate upstream national pollution discharge elimination system criteria will be implemented to maintain the water quality of the downstream wetlands. g. If existing sensitive environmental areas are affected, then suitable mitigation will be provided.	The proposed projects would also improve pedestrian access to natural areas in the community via trail and bicycle connections across I-5. In addition, the improvements would be consistent with provisions that address fill in the 100-year floodplain for roads and other public improvements as development would be consistent with allowed uses allowed pursuant to the A-1-10 Zone and other existing zoning, is capable of withstanding periodic flooding, and does not require the construction of offsite flood protective works. BMPs to minimize potential impacts to ground, surface and ocean water quality would be implemented during all phases of construction and operations and would potentially enhance long-term water quality in the corridor through reduced sediment loading of adjacent wetland/riparian areas. In addition, the project includes a no net loss standard for potentially affected wetlands and ESHA. However, specific project details for highway and rail improvements are under development to determine whether there would be no increase in the peak runoff rate from the developed site over the existing undeveloped site as a result of the intensity of rainfall expected during a ten-year storm frequency event.
TRANSPORTATION	
Transportation Element POLICIES 1. The construction of new roads or improvements to existing roads adjacent to open space areas shall mitigate impacts through the restoration and enhancement of that open space system to the maximum extent feasible.	*Potentially consistent - Highway/Rail.* The proposed improvements would not significantly encroach into adjacent open space areas or landforms, as discussed in policies above.

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2. When road improvements are proposed, those portions that traverse sensitive areas (water courses, wildlife corridors, sensitive biological areas, etc.) shall be designed to reduce or eliminate impacts to those areas. 3. Improved public transit service should be provided to the Torrey Pines community, especially to the employment area of Sorrento Valley and the North Torrey Pines mesa area. Regular bus service, light rail transit and commuter rail should link the Torrey Pines community with the regional transportation network. 4. Provide bikeway and pedestrian paths that link all areas within the community, as well as linking Torrey Pines with surrounding communities and jurisdictions. 5. Provide improvements to the road network that will facilitate traffic circulation without negatively impacting adjacent open space areas and residential neighborhoods. 6. Require that Transportation Demand Management strategies are implemented within the Sorrento Valley industrial area. Provide bicycle racks/lockers, showers, and locker room facilities for employees who bike or walk to work. 7. All available traffic measures that improve pedestrian safety on Del Mar Heights Road should be investigated, and where feasible, implemented.	The TREP/PWP's intent is to improve existing and future transportation operations in the north coast corridor for the safe and efficient regional movement of people and goods. The proposed improvements would seek to protect and enhance community character through sensitive design and community enhancement features. The TREP/PWP would provide an efficient and integrated transportation program by increasing rail, carpooling and public transit capacity along I-5 and rail lines within the City and corridor, and by providing multi-modal linkages to transit centers, neighborhoods and coastal and inland recreational use areas for pedestrian and bicycle circulation.
RESIDENTIAL ELEMENT	
Policy 4. Residential neighborhoods should be preserved and protected from encroachment by adjacent uses including commercial development and the construction of public roads and utilities.	*Potentially consistent - Highway/Rail.* Through sensitive design measures, use of retaining and sound walls, and siting within existing ROW, the TREP/PWP would not significantly encroach into adjacent residential areas.
LOCAL COASTAL PROGRAM POLICIES	
HILLSIDES	
1. To protect the scenic and visual qualities of the site as seen from public vantage points, recreational areas, and roads or highways, the proposed development shall minimize the alteration of natural landforms and create only new slopes that are topographically compatible with natural landforms of the surrounding area. 2. The proposed development restores and enhances any previously manufactured slopes on the site to make them compatible with surrounding natural landforms and native vegetation. 3. The proposed development, including any fill or grading, does not create any significant new soil erosion, silting of lower slopes, slide damage or other geologic instability, flooding, or permanent scarring.	*Potentially consistent – Highway.* The I-5 NCC project would include development on slopes of 25% or greater natural gradient. Alteration of natural landforms and vegetation removal would result from new cut slopes, fill slopes, bridge structures, traffic lanes and sound and retaining walls. The use of sound and retaining walls would minimize the need for more extensive grading or slope alteration. Further, immediate plant cover on

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4. The proposed development contains a native vegetation restoration and enhancement program for those portions of the site in 25 percent or greater slopes that will provide as follows: a. For every area or quantity of native vegetation located on slopes of 25 percent grade and over, in excess of the encroachment allowance provided in the table below that is disturbed by the development, an area equal to 120 percent of the disturbed area shall be restored in native vegetation. The restoration and enhancement program shall be performed prior to or concurrently with the development and may be incorporated into the design and implementation of the overall landscaping program for the site. b. The native vegetation restoration and enhancement program required by Subsection (a) shall be located on the site of the permitted development. However, if the size, topography or biological characteristics of the site are determined by the Planning Director to be unsuitable for said restoration or enhancement program, then the native vegetation shall be provided at one or more off-site locations within the Coastal Zone, which may include publicly owned rights-of-way. If such locations within the Coastal Zone are infeasible, then such native vegetation restoration or enhancement program shall be provided at other suitable locations within the City of San Diego outside the Coastal Zone. c. All native vegetation restoration and enhancement programs shall be prepared by a biologist, registered landscape architect, or other qualified professional in close consultation with the Department of Fish and Game and U.S. Fish and Wildlife Service. In the case of those landforms that consist of slopes of 25 percent and over which have been identified as possessing environmentally sensitive habitats or significant scenic amenities or hazards to development (including major undeveloped sites with high erodibility characteristics), the following policy shall apply: 1. Slopes of 25 percent grade and over shall be preserved in their natural state, provided a minimal encroachment into the steep slope areas over 25 percent may be permitted as set forth in the following table: For the purposes of this ordinance, encroachment shall be defined as any area of twenty-five percent (25%) or greater slope in which the natural landform is altered by grading, is rendered incapable of supporting vegetation due to the displacement required for the building, accessory structures or paving, or is cleared of vegetation, other than allowed below. The following uses shall be exempt from the encroachment limitations set forth above: a. Major public roads and collector streets identified in the Circulation Element of an adopted community plan or the General Plan. b. Local public streets or private roads and driveways which are necessary for access to the more developable portions of a site on slopes of less than 25 percent grade, provided no less environmentally damaging alternative exists. The determination of whether or not a proposed road or driveway qualifies for an exemption, in whole or in part, shall be made by the Planning Director based upon an analysis of the project site.	cut/fill slopes and landscaping of improvements would reduce visual impacts, and would screen and soften views. The proposed highway facilities and sound/retaining walls would blend with the surrounding environment to the extent feasible, reflecting the visual character and goals of the City. Generally, freeway landscaping would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The project also includes opportunities to underground existing utilities where feasible thereby enhancing visual resources and reducing urbanized landscape/features where possible. *Potentially consistent - Rail.* The majority of conceptual alignment options for rail improvements would remain within or along the existing transportation corridor, which substantially minimizes the potential for adverse impacts to visual resources. Public views to and along the ocean and shoreline, or to scenic inland recreational use areas would be preserved. While at-grade track improvements have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations, the increase in improvement area would be minor, incremental and consistent with the existing facility

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c. Public utility systems.	and the surrounding environment. The proposed rail improvement options that include tunneling could allow for restoring open space areas presently displaced by portions of the existing facility, with an option of removing the rail service from the coastal bluffs in Del Mar and Los Peñasquitos Lagoon, which would reduce overall visibility of the rail facility and result in a beneficial impact to these coastal viewsheds. Additional opportunities for coastal visual resources could include replacement of existing rail bridge structures which, due to their age, are relatively dense in form and mass and presently block views to the ocean and/or inland areas. TREP improvements that would replace and update bridge structures could open the viewshed and, thus, reduce the visual mass of the structure and provide a more visually permeable design.
GRADING / WATER QUALITY	
A grading plan that incorporates runoff and erosion control procedures to be utilized during all phases of project development shall be prepared and submitted concurrently with subdivision improvement plans or planned development applications where such development is proposed to occur on lands that will be graded, filled, or have a slope of 25 percent or greater. Such a plan shall be prepared by a registered civil engineer and shall be designed to assure that there will be no increase in the peak runoff rate from the fully developed site over the rate of discharge that would occur from the existing undeveloped site as a result of the intensity of rainfall expected during a six-hour period once every ten years (the "six-hour, ten year" design storm). Runoff control shall be accomplished by establishing on-site or at suitable nearby locations catchment basins, detention basins, and siltation traps along with energy dissipating measures at the terminus of storm drains, or other similar means of equal or greater effectiveness. Sediment basins (debris basins, desilting basins, or silt traps) shall be installed in conjunction with the initial grading operation and maintained through the development process as necessary to remove sediment from runoff waters draining from the land undergoing development. Areas disturbed but not completed prior to November 15, including graded pads and stockpiles, shall be suitably prepared to prevent soil loss during the late fall and winter seasons. All	*Potentially inconsistent - Highway/Rail.* The I-5 highway and LOSSAN rail improvements would include BMPs to address potential water quality impacts during the construction and operational phases of the projects, and to control and treat stormwater runoff. The improvements would incorporate landscaping with noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. Opportunities to underground existing utilities where

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graded slopes shall be stabilized prior to November 15 by means of native vegetation, if feasible, or by other suitable means. The use of vegetation as a means to control site erosion shall be accomplished pursuant to plans and specifications prepared by a licensed landscape architect or other qualified professional. Erosion control utilizing mulching, fertilization and irrigation within sufficient time prior to November 15 to provide landscape coverage that is adequate to achieve the provisions of this policy. Temporary erosion control measures shall include the use of berms, interceptor ditches, sandbagging, hay bales, filtered inlets, debris basins, silt traps, or other similar means of equal or greater effectiveness. From November 15 to March 31, grading may be permitted provided the applicant conforms to the requirements listed below and submits monthly documentation within two weeks following the end of the preceding month to the City Engineer on the condition of the erosion control procedures for graded pads, slopes and stockpiles whenever precipitation during the month exceeds two (2) inches. From November 15 to March 31, grading may only occur: 1. In increments as determined by the City Engineer based on site-specific soil erodibility and slopes in order to minimize soil exposure. 2. The applicant has installed temporary erosion control measures that the City Engineer finds are designed to assure that there will be no increase in the peak runoff rate. 3. The applicant posts a bond which shall remain in force and effect for one year after acceptance by the City of the subdivision sufficient to cover the costs of any remedial grading and replanting of vegetation, including any grading and replanting of vegetation, including any restoration of lagoon, wetland, or other environmentally sensitive habitat areas adversely affected by the failure of the erosion control measures. 4. The applicant agrees to provide daily documentation to the City Engineer of the condition of the erosion control procedures for any 24-hour period in which precipitation exceeds 0.25 inches. Failure to provide such documentation or occurrence of any significant discharge of sediments or silts in violation of this policy shall constitute automatic grounds for suspension of the applicant's grading permit(s) during the period of November 15 to March 31. Grading for properties within the Coastal Zone which drain into Los Peñasquitos Lagoon or San Dieguito Lagoon require compliance with erosion control measures specified in the document "Erosion Control Measures for North City Areas Draining to Los Peñasquitos or San Dieguito Lagoons," on file in the Office of the City Clerk as Document No. 00-17068.	feasible would further enhance visual resources and reduce the urbanized landscape where feasible. Additional water quality analysis is necessary to determine if the project would be designed consistent with the specific development standards of this policy. Specific project details are under development to determine whether no increase in the peak runoff rate would result during a "six-hour, ten year" design storm.
WETLANDS / ENVIRONMENTALLY SENSITIVE RESOURCES	
The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted where there is no feasible, less environmentally damaging alternative, where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following newly permitted uses and activities:	*Potentially inconsistent - Highway/Rail.* Due to the existing location and orientation of the I-5 and LOSSAN rail facilities, the TREP/PWP improvements would result in minor development

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1. 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. 2. Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. 3. Restoration purposes. 4. Nature study, aquaculture or similar resource-dependent activities. Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems. Buffer zones sufficient to protect wetlands shall generally be 100 feet in width, unless the applicant demonstrates that a smaller buffer will protect the resources of the wetland based on site-specific information including but not limited to the type and size of the development and/or proposed mitigation which will also achieve the purposes of the buffer. The California Department of Fish and Game and the U.S. Fish and Wildlife Service shall be consulted in such buffer determinations and their comments shall be accorded great weight by the City of San Diego and by the California Coastal Commission. Developments permitted in wetland buffer areas shall be limited to access paths, passive recreational areas, fences and similar improvements necessary to protect the wetland, and such improvements shall be restricted to the upper/inland half of the buffer zone. Developments shall be located so as not to contribute to increased sediment loading of the wetland, cause disturbance to its fish and wildlife values, or otherwise impair the functional capacity of the wetland.	encroachments into buffer areas and would potentially result in direct impacts to coastal wetlands within the City. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. This policy also provides for reduced buffers where it can be demonstrated, on a site-specific basis, that the reduced buffer would achieve the purposes of the standard buffer widths in consultation with California Department of Fish and Game and the U.S. Fish and Wildlife Service. Caltrans and SANDAG are continually working with these agencies to ensure the proposed projects are designed to avoid or minimize disturbances to fish, wildlife or functional capacity of the habitat. The proposed improvements would minimize potential impacts to ground, surface and ocean water quality during all phases of the projects and would potentially enhance long-term water quality in the corridor through use of BMPs, which could reduce

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	sediment loading into adjacent wetland/riparian areas.
DEVELOPMENT IN FLOODPLAIN AREAS	
Within the l00-year floodplain fringe of the San Dieguito River, fill for roads and other public improvements and/or permanent structures will be allowed only if such development is consistent with uses allowed pursuant to the A-1-10 Zone and other existing zoning, is capable of withstanding periodic flooding, and does not require the construction of off-site flood protective works. The following requirements shall also be met: Existing environmentally sensitive habitat areas will not be significantly affected and, that as a condition of development, significant new riparian corridors will be planted and maintained to function as enhanced wildlife corridors. Such revegetation program shall, to the maximum extent feasible, utilize native vegetation and shall be designed and implemented by a professional landscape architect, biologist, or other qualified professional in close consultation with the Department of Fish and Game and the U.S. Fish and Wildlife Service. The design of the development incorporates the findings and recommendations of both a site-specific and coastal watershed hydrologic study in order that the development either assures that there will be no increase in the peak runoff rate from the fully developed site over the greatest discharge that would occur from the existing undeveloped site as a result of the intensity of rainfall expected during a six-hour period once every ten years, and neither significantly increases nor contributes to downstream bank erosion and sedimentation, including wetlands, lagoons, and other environmentally sensitive habitat areas.	*Potentially inconsistent - Highway/Rail.* Due to the existing location and orientation of the I-5 and LOSSAN rail facilities, improvements could occur in areas of the San Dieguito Lagoon and River Valley containing wetlands and riparian habitat, which is potentially inconsistent with this policy. However, the improvements would be consistent with policy provisions that address fill in the 100-year floodplain for roads and other public improvements as the proposed development is consistent with uses allowed pursuant to the A-1-10 Zone and other existing zoning, is capable of withstanding periodic flooding, and does not require the construction of offsite flood protective works. The improvements are designed to maintain natural buffers between the highway and rail corridors and adjacent land uses to the greatest extent feasible, and would adhere to a no net loss standard for wetland and ESHA impacts. In addition, the proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San

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	Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. BMPs to address potential water quality impacts during the construction and operational phases of the project could reduce sediment loading into adjacent wetland/riparian areas. However, specific project details for highway and rail improvements are being developed to determine whether there would be no increase in the peak runoff rate would result during a "six-hour, ten year" design storm.
DEVELOPMENT IN AREAS OF SENSITIVE VEGETATION	
In addition, to the extent applicable, all new development within the coastal zone shall be designed to be consistent with multi-species and multi-habitat preservation goals and requirements as established in the statewide Natural Communities Conservation Planning (NCCP) Program, and shall comply with the City of San Diego MSCP Interim Habitat Loss Permit Process, or shall obtain an incidental take permit under Section 4d, Section 7 or Section l0a of the Endangered Species Act related to the California Gnatcatcher. Compliance with these goals and requirements shall be implemented in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game.	*Potentially consistent - Highway/Rail.* The proposed improvements would be designed consistent with applicable multi-habitat preservation plans/programs, as needed, and resource agencies consulted where required. The highway and rail projects would provide for no net loss of wetland and ESHA resources as well as in-kind preservation of habitat or out-of-kind habitat enhancement that would result in significant improvements to natural ecosystems within the corridor.
VISUAL RESOURCES	
1. Significant scenic resource areas including San Dieguito River Regional Park, Crest Canyon, Torrey Pines State Reserve Extension, Los Peñasquitos Lagoon, and the Carroll Canyon Creek Corridor have been designated and rezoned to open space. 2. Three road segments possessing dramatic vistas are recommended for a Scenic Route designation including North Torrey Pines Road, Carmel Valley Road, and Sorrento Valley Road. 3. Power distribution lines and utilities along Sorrento Valley Road and within Los Peñasquitos Lagoon are	*Potentially consistent – Highway.* The I-5 NCC highway project has been designed to occur within or contiguous to the existing ROW to the greatest extent feasible, to minimize encroachment into adjacent open spaces, bluffs or lagoon areas. Highway improvements would preserve public views to significant coastal and inland visual resources.

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recommended to be relocated underground. 4. Future development adjacent to the Torrey Pines Reserve Extension, San Dieguito Lagoon, and Crest Canyon areas shall provide for adequate buffer areas. Development proposals shall provide adequate setbacks to avoid significant erosion, visual or sediment impacts from construction. Setbacks also shall be required to prevent fire breaks from being constructed on reserve property or into off-site sensitive areas. No clear-cutting or removal of vegetation shall be allowed within the San Dieguito Lagoon Preserve, Crest Canyon or the Torrey Pines State Reserve Extension. 5. Landscaping of properties adjacent to open space areas shall not use invasive plant species. Landscaping adjacent to these areas should use plant species naturally occurring in that area. 9. Those disturbed areas of the Carroll Canyon Creek Corridor shall be revegetated and planted with a combination of native trees, primarily riparian woodlands species and native shrubs. The revegetation plan shall include a monitoring program to determine the success of the program and identify maintenance needs. 10. Mechanical equipment, outdoor storage and appurtenances shall be screened from view and designed as integral parts of the overall building design. Fences, walls, grillwork, etc. should be of similar material and color as the main building. 11. The Plan recommends the preservation of Torrey Pines trees in private as well as public areas, and encourages the planting of Torrey Pines trees in roadways and other landscaped areas. Should Torrey Pines trees require removal, relocation or replacement of the trees shall occur whenever feasible.	The improvements would also potentially facilitate these goals as parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, thereby creating new open space and vista points. Measures to minimize view impacts include use of architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment. Proposed landscaping would also screen and soften views of the facilities and blend with the surrounding environment, reflective of the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. Underground of existing utilities where feasible would further enhance visual resources and reduce the urbanized landscape/features. *Potentially consistent - Rail.* As the proposed LOSSAN rail improvements would be contained primarily within existing ROW, grading of undeveloped lands would be minimized, thereby reducing the potential for any significant changes to

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	the existing natural environment. Future project specific environmental analysis would focus on the potential affects to the existing visual character/compatibility and quality of the area and would include project siting adjustments and design modifications, landscaping, and other measures to minimize potential impacts to the natural environment.

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URBAN DESIGN	
Goals • Improve accessibility and use relationships within the community by establishing well-defined, multi-modal linkage systems. • Establish standards which give physical design direction to private developments and public improvements. • Provide for the needs of pedestrians in all future design and development decisions. • Ensure that San Diego's climate and the community's unique topography and vegetation influence the planning and design of new projects. • Ensure that every new development contributes to the public realm and street livability by providing visual amenities and a sense of place.	*Potentially consistent - Highway/Rail.* The TREP/PWP would improve highway and rail transportation along the NCC corridor. I-5 interchanges would be reconfigured to allow for increased traffic and pedestrian flow, and would be designed to preserve and enahnce the area's unique landforms and habitats to the greatest extent feasible. The LOSSAN improvements would improve capacity and, therefore, improve reliability, reduce travel times and the opportunity for increased service levels. The TREP/PWP also includes a number of community enhancement features that would provide and/or improve pedestrian and bicycle facilities, improve linkages, and access to public transit centers and recreational facilities while minimizing impacts to the adjacent topography and vegetation. Measures to minimize potential impacts include use of architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment. Proposed landscaping would also screen and soften views of the facilities and blend with the surrounding environment, reflective of the character and goals of the City.
SUBAREA 2: TORREY PINES	
OBJECTIVES Protect and take maximum advantage of the Torrey Pines Subarea's topography and unique natural vegetation. • Ensuring that developments do not intrude into the designated open space areas. • Preserving existing mature trees. When feasible, development should occur around and in between mature trees. If that is not feasible, consideration should be given to moving trees into temporary nurseries during construction.	*Potentially consistent - Highway/Rail.* The I-5 highway and LOSSAN rail NCC projects have been designed to improve transportation, pedestrian and bicycle circulation in the City while reducing the footprint to the maximum extent feasible, to avoid impacts or minimize encroachment onto sensitive and constrained areas in the City. The improvements would result in removal of existing

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Transplanting is usually less expensive than buying new trees of equal size for the site. • Requiring that projects be developed under Planned Development concepts in compliance with the following criteria in addition to that found in the Hillside Review Overlay Zone and the Resource Protection Overlay Zone. a. Avoid destruction of native vegetation, wildlife habitats, geologic landmarks, or known archaeological resources. b. Restore or otherwise improve previously graded and/or scarred slopes. c. Accommodate development to the natural surface drainage system. Avoid unnecessary alterations to all natural watercourses such as streams, creeks, gullies, ravines, and washes, including alterations which adversely impact neighboring properties. d. Ensure zero increase in runoff by preparing a storm water management plan. e. Use the structural quality of the soils as a determinant of construction type. Incorporate appropriate mitigations for all identified geologic problems. Avoid reliance on engineering solutions to identified geologic problems where alternative siting would reduce grading requirements. • Planting trees in dense clusters to preserve and enhance the existing wooded character of this subarea. • Ensuring that future development does not contribute to erosion, geologic instability or alteration of natural landforms along canyons bluffs or cliffs. Most of the Torrey Pines Subarea is within the Coastal Zone and must be reviewed for compliance with the Coastal Zone regulations. • Ensure visual and physical access to natural canyons, resource areas and scenic vistas. • Avoiding walling off views from public roadways and parklands through inappropriate landscaping, siting of development or unnecessary use of block walls or other solid fencing. • Ensure that the massing of structures and design detail of new buildings contribute to a visually coherent streetscape. • Improve pedestrian interaction between the UCSD campus and the surrounding community.	vegetation and grading of existing landforms and construction of new retaining and sound walls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). However, measures to screen and soften views of the improvements to blend with the surrounding environment would occur through use of architectural detailing, enhanced color and texture of walls, sound wall planting pockets, and terraced retaining walls, and would reflect the visual character and goals of the City. Freeway landscaping would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover and, in less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The proposed improvements would also minimize potential impacts to ground, surface and ocean water quality during all phases of the projects and would potentially enhance long-term water quality in the corridor through use of BMPs. Short term potential impacts to water quality during the construction phase would be prevented/ minimized through the use of Construction site BMPs while the long term potential impacts during each facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby

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	potentially enhancing water quality throughout the corridor by reducing sediment loading into area waterways. A Draft EIR/EIS has been prepared for the I-5 NCC highway project, which includes soils and geotechnical studies documenting it would not adversely affect hillside or soil stability. The rail project would prepare site-specific soils and geotechnical studies to ensure that future rail projects do not adversely affect hillside and soil stability.
SUBAREA 3: MIRAMAR	
OBJECTIVE: Preserve the natural finger canyons which characterize the Miramar Subarea. • Retaining the A-1-10 Zone on areas designated for open space. • Implementing the Hillside Review Overlay Zone and the Resource Protection Ordinance (RPO Slope Regulations). Enhance the eastern entrance into the community.	*Potentially consistent - Highway/Rail.* See discussion above, which is applicable throughout the University Community Plan area.
SUBAREA 4: SOUTH UNIVERSITY	
OBJECTIVE: Protect Rose and San Clemente canyons as natural regional resources, and preserve the open space character of the various finger canyons which traverse the subarea.	*Potentially consistent - Highway/Rail.* See discussion above, which is applicable throughout the University Community Plan area.
PLAN POLICY ELEMENTS	
TRANSPORTATION ELEMENT	
Goals A. Provide a network of transportation systems that are integrated, complementary and compatible with other citywide and regional goals. The network should take into account the physical, social, economic and environmental conditions of the community, both present and future. B. Provide a balanced public transportation system to link the entire community to all of its own activity areas and to the San Diego metropolitan area as a whole. C. Encourage alternative modes of transportation by requiring developer participation in transit facility improvements, the	*Potentially consistent - Highway/Rail.* The main intent of the TREP/PWP is to improve the existing and future traffic and rail operations in the north coast corridor for the safe and efficient regional movement of people and goods. The proposed improvements would reduce congestion, increase capacity for rail and high occupancy travel modes, and provide for multi-modal transportation options throughout the City and corridor while protecting

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Intra-Community Shuttle Loop and the LRT line. D. Ensure implementation of Council Policy 600-34, Transit Planning and Development.	and enhancing community character with sensitive design and community enhancement features. The TREP/PWP would create and enhance linkages for pedestrian and bicycle circulation through improvements to facilities and routes that connect with public transit centers, link neighborhoods and connect coastal and inland recreation use areas.
4. Topographic Alteration Grading required for street improvements or expansion should be sensitive to the topography. Cut and fill slopes should be minimized and contoured and exposed slopes promptly replanted, preferably with native vegetation.	*Potentially consistent - Highway/Rail.* The improvements would not significantly encroach into adjacent land use areas as they would generally occur within existing ROW. The use of sound and retaining walls would minimize the need for more extensive grading or slope alteration in areas outside of the ROW. Further, immediate plant cover on cut/fill slopes and landscaping of improvements would reduce impacts, and would screen and soften views. Generally, freeway landscaping would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist.
5. Light Rail Transit System Encourage the development of a high-speed, light-rail transit system to serve the University community and other northern communities.	*Potentially consistent - Highway/Rail.* The TREP/PWP improvements would increase the capacity and viability of efficient rail service to communities throughout the north coast corridor.
DEVELOPMENT INTENSITY ELEMENT	
Goal C. Provide a workable circulation system which accommodates anticipated traffic without reducing the Level of Service below "D."	*Potentially consistent - Highway/Rail.* See discussion under Transportation Element Goals, above.
INDUSTRIAL ELEMENT	
Goal B. Protect a reserve of manufacturing land from encroachment by non-manufacturing uses.	*Potentially consistent - Highway/Rail.* Although the TREP/PWP improvements may encroach on lands designated for manufacturing due to the

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	existing facilities location and orientation, any encroachments would be minimal and linear in nature and are not anticipated to affect the viability of manufacturing zoned land in the University Community Plan area.
PUBLIC FACILITIES ELEMENT	
G. Utilities 1. Electrical Utilities Where it is economically feasible, overhead utility lines should be replaced by underground facilities. Undergrounding is not practical for transmission lines, however new development should provide for the undergrounding of distribution service utility lines. If additional distribution lines are proposed in the community, they should be carefully reviewed for environmental, land use and aesthetic impacts.	*Potentially consistent - Highway/Rail.* The TREP/PWP improvements may include relocation of above-ground utility lines along the I-5 and rail project corridors. Relocation of utility lines would be placed underground, where feasible.
OPEN SPACE AND RECREATION ELEMENT	
Goals A. Preserve the natural resources of the community through the appropriate designation and use of open space. Major topographic features and biological resources should be preserved as undeveloped open space. B. Provide a system of population-based parks to meet the community's needs for outdoor recreation. C. Establish an open space system that will utilize the terrain and natural drainage system to guide the form of urban development, enhance neighborhood identity and separate incompatible land uses. D. Promote public health and safety by designating areas with high potential for landslides, earthquake faults or aircraft accidents as open space. E. Develop a linkage system to connect recreational and natural open space areas throughout the community. Proposals b. The two coastal canyons should be preserved in a natural condition. Presently disturbed vegetation should be restored. 4. Sorrento Valley - Soledad Canyon Open Space a. These areas should be retained in an open and natural state and should either be preserved as natural open space easements or deeded to the City of San Diego for open space. b. Any disturbance of the hillsides should be mitigated by contour grading and revegetation with native species.	*Potentially consistent – Highway.* The I-5 highway project would not substantially affect existing open spaces, drainages or bluffs; however, throughout the City improvements would alter existing visual resources through the removal of vegetation and grading of adjacent landforms, implementation of new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). The highway project would facilitate development of community parks and recreational use areas as parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, thereby creating new open space and vista points.

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c. Steep hillsides facing the canyons should be preserved by establishing open space easements in conjunction with new development. 6. Rose Canyon City-owned land within Rose Canyon should be preserved as dedicated open a. Future uses of Rose Canyon should consider the topography, vegetation and scenic value of the canyon. For this reason, passive recreational uses are recommended rather than active uses requiring major grading and construction. e. Developments along the northern edge of Rose Canyon should provide open space easements bordering the canyon. If grading within the easements is required for development, the final grading and revegetation should blend with the natural canyon features. The existing open space easement between Regents Road and Genesee Avenue should be maintained; access rights should be acquired to permit pedestrian and bicycle paths linking this area with Rose Canyon. 7. San Clemente Canyon Marian Bear Park should be preserved and maintained by the City of San Diego as a regional, resource-based park. The canyon and its riparian vegetation, including the mature oak and sycamore trees, should be preserved in their natural state. 8. Gilman Drive Slopes The slopes along Gilman Drive between I-5 and Via Alicante should be preserved as undeveloped open space. In addition, properties bordering Gilman Drive should provide a visual extension of the open space corridor north from Via Alicante to La Jolla Village Drive. Landscaping and site design on private properties abutting the street and adjacent to the canyon should enhance the visual quality and continuity of this open space corridor. An existing partial bike lane should be continued to connect the UCSD with the Rose Canyon bikeway via Gilman Drive. E. Hillside Development Development within canyon bottoms and on slopes with greater than 25 percent gradients should be strongly discouraged. However, if development does occur on canyon bottoms, along bluffs or on steep slopes, the following guidelines should be followed: *2. Grading Principles* In steep terrain, padded areas should be made in smaller increments to minimize bank height and level areas should be created more by building structures than by grading. The creation of standard, level building pads should be avoided. As a general guideline, only a small portion (ten percent) of the slopes with 25 percent or greater gradients should be graded.	The highway project would include measures to landscape the I-5 NCC project improvements to screen and soften views of the facility, and to blend with the surrounding environment. Architectural detailing, enhanced color and texture of walls, sound wall planting pockets, and terraced retaining walls would support the visual character and goals of the City. Generally, new freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. In addition, the project includes opportunities to underground existing utilities where feasible reducing urbanized landscape/features where feasible. BMPs to address potential water quality impacts during the construction and operational phases of the project and to control and treat stormwater runoff would be implemented, and could improve long-term water quality by reducing sediment loading into area waterways. Due to the existing location and orientation of the highway facility, encroachments onto slopes greater than 25% natural gradient may increase erosion from grading. A Draft EIR/EIS was prepared for the I-5 NCC highway project that includes soils and geotechnical studies documenting the project will not adversely affect hillside or soil stability.

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3. Vegetation Except as necessary to provide adequate fire buffers around structures, the natural vegetation on slopes should be retained. Disturbed slopes should be revegetated with native flora. *4. Coastal Development* Development, alteration or grading of natural landforms should not occur along bluffs or cliffs, within drainage canyons or on slopes of 25 percent or greater in the Coastal Zone in order to prevent erosion and to protect existing native plant communities and visual resources. *5. Visual Impacts* The design of hillside developments should relate to the existing topography and should be compatible with the scale and character of surrounding development. Attention should be given to building scale, roof design, materials and color. Visual access to open space areas from public roadways should be maintained. *6. Safety* Development on slopes or near bluffs should not contribute to erosion or geologic instability of the site or adjacent properties. A detailed drainage plan should be required for all new bluff-top development. Any geologic constraints to development should be identified prior to project approval.	*Potentially consistent – Rail.* The proposed LOSSAN NCC rail facility track improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize substantial encroachment into adjacent open space areas, and would minimize the need for excessive grading and landform modification that could otherwise disrupt the natural character of the land, water, vegetative, and wildlife resources in the area. Furthermore, the majority of conceptual alignment options for rail improvements would remain within or along the existing rail transportation corridor, which substantially minimizes the potential for adverse impacts to visual resources resulting from implementing the proposed track improvements. At-grade track improvements would preserve public views to and along the ocean and shoreline, or to scenic inland areas for both traveler and adjoining public viewing locations. While at-grade track improvements have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations, the increase in improvement area would be minor, incremental and consistent with the existing facility and the surrounding environment. The proposed rail improvement options for tunneling through portions of the corridor could also allow for restoring open space areas presently displaced by portions of the existing facility, which would reduce overall visibility of the rail facility and result in a beneficial impact to these viewsheds.
NOISE ELEMENT	
Goals A. Minimize and avoid adverse noise impacts by planning for the appropriate placement and intensity of land uses	*Potentially consistent – Highway.* The I-5 NCC project includes the construction of soundwalls

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relative to noise sources. B. Provide guidelines for the mitigation of noise impacts where incompatible land uses are located in a high noise environment. 1. Projects impacted by roadway noise or point sources should be carefully designed so that building orientation, placement of windows and other design features will minimize noise impacts. 2. Residential development along the freeways should be sufficiently buffered from vehicular noise by means of setbacks or elevation differences wherever feasible, to avoid the use of solid walls as mitigation. Some of these buffers along the freeways or major roads could be used for compatible uses, such as pedestrian pathways or bikeways and linear parks. 3. Where solid walls are necessary to mitigate noise impacts along roadways, the design of the wall and surrounding land should soften the visual effect of the wall. A site-sensitive wall design should be combined with landscaping and berms to enhance the visual quality of the wall.	along portions of the I-5 corridor to mitigate potential impacts on noise sensitive receptors. The visual impact from the proposed walls would be mitigated to the greatest extent feasible through proposed wall treatments utilizing texture, color and landscaping to enhance the visual quality of the walls. The proposed project would also implement a detailed landscape plan throughout the corridor to further minimize impacts to adjacent areas. *Potentially consistent – Rail.* As part of future project-level analyses for the LOSSAN rail improvements, rail design and development strategies that specify the use of sound walls/noise barriers would be applied, as needed, to ensure that specific projects minimize potential noise impacts on surrounding land uses to the greatest extent feasible. The project-level analyses would also provide mitigation to minimize potential visual impacts from implementation of any sound walls/barriers.
SAFETY ELEMENT	
Goals B. Ensure that proposed development does not create or increase geologic hazards either on- or off-site. *2. Hydrology* Maintain the natural drainage system and minimize the use of impervious surfaces. Concentrations of runoff should be adequately controlled to prevent an increase in downstream erosion. Irrigation systems should be properly designed to avoid over-watering. *3. Vegetation* Native vegetation should be retained where possible. Graded slopes should be revegetated with native or drought-tolerant species to restore pre-development drainage conditions.	*Potentially consistent - Highway/Rail.* While the proposed improvements are located in an area potentially subject to various geologic hazards, mitigation and design measures would be implemented to ensure geologic stability of the improvements. Furthermore, future project-level analyses of proposed rail improvements would include preparation of a soils and geotechnical report to ensure geologic stability of the improvements. The TREP/PWP improvements would include BMPs to address potential water quality impacts during the construction and operational phases of

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	the projects, and to control and treat stormwater runoff. Landscaping with noninvasive drought tolerant ornamental trees, shrubs, and groundcover would revegetate any graded slopes. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted, and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. In addition, undergrounding existing utilities, where feasible, would enhance visual resources and reduce urbanized landscape/features.
RESOURCE MANAGEMENT ELEMENT	
Goals A. Preserve the community's natural topography, particularly in the coastal zone and in major canyon systems. B. Increase accessibility to the beaches and shoreline in a manner compatible with resources preservation. C. Protect biological resources through the wise management and use of community's natural open space and parks. D. Contribute to the maintenance or improvement of regional water quality by controlling siltation and urban pollutants in runoff. E. Encourage the conservation of water in the design and construction of buildings and in landscaping. F. Reduce energy consumption by requiring energy efficiency in building design and landscaping and by planning for a self-contained community and energy-efficient transportation. G. Provide for the identification and recovery of significant paleontological resources. H. Ensure the effective preservation and management of significant archaeological and historic resources. Proposals A. Natural resources *1. Landform Preservation* Canyons, hillsides and natural drainage systems should be preserved. Grading should be kept to a minimum,	*Potentially inconsistent - Highway/Rail.* The main intent of the TREP/PWP is to improve the future traffic and rail operations in the north coast corridor, which would enhance coastal access by helping to reduce congestion, increase rail capacity, and improve public transit options for travel to coastal and inland recreational use areas. In addition, the TREP/PWP would enhance pedestrian circulation and bicycle opportunities to the coast by connecting inland and coastal communities across the I-5 and LOSSAN rail corridors. The projects have been designed to occur generally within existing ROW and would not significantly encroach into adjacent open space areas and sensitive resources. Opportunities to underground existing utilities where feasible would also enhance visual resources and reduce the urbanized landscape/features where feasible. The projects would include BMPs to address potential water quality impacts, and landscaping

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particularly adjacent to designated open space areas. Specific proposals for development of resource-based parks and hillside development are contained in the Open Space and Recreation Element. *2. Biological Resources* Many of the community's biological resources are proposed for preservation in natural parks, as specifically addressed in the Open Space and Recreation Element. In other areas, native vegetation should be retained wherever feasible to reduce erosion, to preserve native species and representative habitats and to buffer open space parks and canyons from urban encroachment. Disturbed areas should be revegetated with native flora. *3. Water Quality/Erosion* Development should minimize erosion and sedimentation. If a project site is on or adjacent to sloping lands, drainage systems should be designed so that the peak rate of runoff for the ten-year-frequency storm event will not exceed the rate under undeveloped conditions. Runoff control should be accomplished by catchment basins, siltation traps, or detention basins along with energy dissipating measures or by other methods which are equally effective. Grading during the rainy season should be avoided wherever possible. Erosion should be minimized by grading in increments during the rainy season and by using temporary erosion control measures. In areas where grading is completed, all disturbed slopes should be stabilized by vegetation or other means prior to the rainy season. *4. Water Conservation* Building construction should incorporate equipment or devices with low water requirements. Landscaping plans should utilize drought-tolerant plants and efficient watering systems. In addition, as health laws allow, "Gray Water" or water reuse systems should be explored for application within the community. *5. Energy Conservation* Development plans should be reviewed for energy conserving features. Site design should maximize opportunities for active and passive heating and cooling by means of appropriate building orientation, solar access and landscaping. If a proposed development would impact solar energy systems off-site, compensating measures should be included in project plans. Commercial and industrial developments should incorporate measures to increase energy-efficient forms of transportation by supplying bicycle racks, showers, priority parking for car pools, bus stops with support facilities and other incentives.	with noninvasive drought tolerant trees, shrubs, and groundcover. However, specific project details for highway and rail improvements are being developed to determine whether there would be no increase in the peak runoff rate from rainfall expected during a "ten year" frequency storm event. A number of archaeological sites that initially were identified within the I-5 NCC highway project's area of potential effect for cultural resources fell out as the project was redesigned such that the areas would be completely avoided. Only two archaeological sites have been identified that could potentially be adversely affected by the project due to sound wall construction should they be built. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources. The proposed rail facility track improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize the need for excessive grading and landform modification that could otherwise impact cultural resources. As part of future environmental review for specific rail projects, the proposed rail improvements would include design refinements or alignments to avoid or minimize impacts to cultural resources.

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OPEN SPACE AND RESOURCE MANAGEMENT	
Goals 2. Prohibit encroachment and impacts of adjacent development, both private and public, on areas designated open space.	*Potentially consistent - Highway/Rail.* Due to the location and orientation of existing highway and rail facilities, the TREP/PWP improvements, although generally located within existing ROW, would potentially encroach into adjacent land uses. The use of retaining and sound walls would minimize the affects on adjacent built developments. Further, encroachments into any open space or environmental resource areas would be minimized to the greatest extent feasible through design features, and would not affect the overall biological value of those areas. The TREP/PWP includes a Resource Enhancement Program that would significantly enhance wetlands and ESHA. Additionally, Caltrans and SANDAG would coordinate with the City and/or wildlife agencies as required to ensure potential impacts to environmentally sensitive resources were minimized and/or mitigated to the maximum extent feasible.
DEVELOPMENT OF STEEP SLOPES AND BLUFFS	
DESIGN GUIDELINES 1. There shall be no grading or development on the bluffs. 2. In areas adjacent to Los Peñasquitos Canyon Preserve, building rooflines should slope in a manner which complements the contours of the natural mesa edge landform. Individual building stories may be staggered contiguous to the mesa edge so as to minimize views of structures from the canyon bottom. 3. When buildings and landscaping are introduced that can be viewed in the context of the bluffs, form, color and texture should be controlled so that development blends into the foreground and does not visually detract from the bluffs. 4. All graded slopes require the preparation of a comprehensive landscape and irrigation plan to provide for rapid stabilization of slope areas. 5. There should be close phasing of grading operations, slope erosion control and building construction to reduce the	*Potentially consistent – Highway.* The I-5 NCC project facilities may encroach on slopes of 25% or greater natural gradient, which could increase erosion caused by grading. However, site-specific soils and geotechnical studies document the project will not adversely affect hillside or soil stability. The highway improvements would include BMPs to address potential erosion impacts during the construction and operational phases of the project. Short term potential erosion impacts during the construction phase would be prevented/minimized through the use of Construction Site BMPs while long term potential erosion impacts during the facility operation and maintenance would be

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period when bare slopes are susceptible to erosion. 6. Individual projects should be designed to preserve natural topography, unique geologic formations and native vegetation to the fullest extent possible. 7. The height of cut and fill slopes should be minimized whenever possible. Contour grading techniques should be used to reduce visual effects of manufactured slopes. 8. Slope gradients on slopes greater than ten feet in height shall not be steeper than 2:1. 9. Permanent energy dissipaters and settlement/catchment basins shall be constructed, with a provision for regular, long-term maintenance. 10. Erosion control devices shall be employed to ensure on-site entrapment of silt during construction. 11. Natural slopes containing native vegetation with a gradient of 25 percent or greater remaining undisturbed as a result of the hillside review process shall be placed in a permanent open space easement or deed restriction as a condition of development approval. The purpose of the open space designation shall be to protect native vegetation and visual resources of importance to the entire community.	prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff. Proposed improvements could result in removal of existing vegetation and grading of existing landforms to accommodate new facilities, including retaining walls and sound walls which could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). However, proposed landscaping would screen and soften views of the improvements. For compatibility with the surrounding environment, architectural details would be incorporated into facility design, including colors, textures and landscaping that reflects the visual character and goals of the City. Freeway landscaping would include noninvasive drought tolerant trees, shrubs, and groundcover and, in less developed areas of the corridor, landscaping with drought tolerant and native trees and shrubs would be planted in areas adjacent to native habitat in consultation with the District Biologist. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing ROW, the proposed improvements would minimize the need for significant grading activities, particularly on slopes of 25% or greater natural gradient that may increase erosion. No rail stations or parking areas are proposed along this portion of the corridor, which may affect existing visual resources. In addition, the footprint of existing bridges across the

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	corridor's waterbodies would not be increased. The rail improvements provide the opportunity to replace the existing bridge across Los Penasquitos with a causeway structure that could increase the tidal flow and remove the embankment from the lagoon, while the tunnel option could allow for the removal of the bridge in the future. The rail project would similarly include BMPs to address potential erosion impacts during the construction and operational phases of the project and to control and treat stormwater runoff.
DEVELOPMENT IN AND ADJACENT TO WETLANDS	
1. Development in areas of mapped or identified wetlands shall be in accordance with the City's Resource Protection Ordinance. 2. Permitted uses within the northern portion of the community shall be limited to aquaculture, wetlands-related scientific research and wetlands-related educational uses; wetland restoration projects; and essential public service projects. 3. Buffers shall be required around wetlands and shall be a minimum of 100 feet in width, unless otherwise determined through site-specific biological investigations and agreement with the City's environmental staff, the California Department of Fish and Game and the U.S. Fish and Wildlife Service. 4. Permitted uses in wetland buffer areas shall be those allowed in wetland areas as defined above; passive recreational uses, access paths and public viewpoints, provided that all necessary mitigation measures are incorporated to protect the wetland; and any improvements necessary to protect wetlands. 5. All buildings or other improvements proposed adjacent to a wetland shall be located so as not to contribute to increased sediment loading of the wetland, disturbance to its habitat value, or otherwise impair the functional capacity of the wetland.	*Potentially inconsistent - Highway/Rail.* Due to the existing location and orientation of the highway and LOSSAN rail facilities, TREP/PWP improvements would encroach into wetland areas within the City, and the proposed improvements may not be found consistent with permitted uses for wetland fill. However, the proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City

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	waterways in the corridor. In addition, as the existing location of the I-5 and rail facilities requires that the proposed project occur in areas containing wetlands and riparian habitat, the project would not provide the standard minimum 100 foot wetland buffer from wetland areas. However, this policy allows for reduced wetland and riparian buffers where it can be demonstrated, on a site-specific basis, that the reduced buffer would achieve the purposes of the standard buffer widths in consultation with California Department of Fish and Game and the U.S. Fish and Wildlife Service. Caltrans and SANDAG are working with these agencies to ensure the proposed project is designed to avoid or minimize disturbances to fish and wildlife species and habitats, or the functional capacity of the resource. BMPs would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through reduced sediment loading into adjacent wetland/riparian areas.
DEVELOPMENT IN AREAS OF SENSITIVE VEGETATION	
1. Development in areas of sensitive vegetation, such as coastal sage scrub, shall be in accord with the City's Resource Protection Ordinance as appropriate. 2. Encroachments into areas of sensitive vegetation shall be as defined in the Resource Protection Ordinance, where it applies. 3. In addition, to the extent applicable, all new development within the coastal zone shall be designed to be consistent with multi-species and multi-habitat preservation goals and requirements as established in the statewide Natural Communities Conservation Planning (NCCP) Program, shall comply with the City of San Diego MSCP Interim Habitat Loss Permit Process, or shall obtain an incidental take permit under Section 4d, Section 7 or Section l0a of the Endangered Species Act related to the California gnatcatcher. Compliance with these goals and requirements shall be	*Potentially inconsistent - Highway/Rail.* The proposed improvements would be designed, to the extent feasible, consistent with applicable multiple species habitat plans and conservation programs. The TREP/PWP would provide for no net loss of sensitive habitat areas, and has identified in-kind preservation of habitat or out-of-kind habitat enhancement that could result in significant improvement to natural ecosystems throughout the corridor.

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implemented in consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Game.	Furthermore, per the City's Resource Protection Ordinance, crossings of wetlands for roads, driveways or trails/pathways dedicated and improved to the limitations and standards under the County Trails Program are allowed, when they are necessary to access adjacent lands, when specific conditions are met. Such conditions include no feasible alternative that avoids the wetland; the crossings are limited to the minimum number feasible; the crossings are located and designed in such a way as to cause the least impact to environmental resources, minimize impacts to sensitive species and prevent barriers to wildlife movement (e.g., crossing widths shall be the minimum feasible and wetlands shall be bridged where feasible); the least-damaging construction methods are utilized (e.g., staging areas shall be located outside of sensitive areas, work shall not be performed during the sensitive avian breeding season, noise attenuation measures shall be included and hours of operation shall be limited so as to comply with all applicable ordinances and to avoid impacts to sensitive resources); the applicant shall prepare an analysis of whether the crossing could feasibly serve adjoining properties and thereby result in minimizing the number of additional crossings required by adjacent development; and there must be no net loss of wetlands and any impacts to wetlands shall be mitigated at a minimum ratio of 3:1 (this shall include a minimum 1:1 creation component, while restoration / enhancement of existing wetlands may be used to make up the remaining requirements for a total 3:1 ratio).
GRADING AND EROSION CONTROLS	
1. Erosion control measures will be incorporated where runoff is concentrated due to development.	*Potentially inconsistent - Highway/Rail.* The

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2. The existence of faults should be confirmed through trenching or other means of subsurface exploration. 3. Development guidelines shall be implemented as defined in the City's HR Guidelines and those presented in the Community Design Guidelines Element of this Plan. 4. Detention basins shall be constructed to control rainfall runoff under ultimate development conditions. Detention basins will not be permitted in City fee-owned open spaces. 5. Sediment and runoff shall be controlled during construction by limiting grading activities and by vegetation of construction slopes. In addition, detention or desilting basins should be located downstream of construction activities to serve as back-up control. 6. New development should assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. 7. All graded slopes shall be stabilized prior to the rainy season by means of vegetation or other suitable means. The use of vegetation as a means to control site erosion shall be accomplished pursuant to plans and specifications prepared by a licensed landscape architect to November 15, as necessary to provide adequate landscape coverage. 8. With new developments, provisions shall be made for maintenance and repair of required runoff and erosion control facilities as well as for the maintenance and repair of any irrigation systems.	TREP/PWP improvements would include BMPs to address potential water quality impacts during the construction and operational phases of the projects. Short term potential impacts to water quality during the construction phases would be prevented/minimized through the use of Construction Site BMPs while long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff. The project would also include landscaping with noninvasive drought tolerant trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant and native trees and shrubs would be planted, and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. In addition, the projects also include opportunities to underground existing utilities, where feasible, thereby enhancing visual resources and reducing urbanized landscape/features. However, additional analysis is necessary to determine if the projects would be designed consistent with the specific development standards of this policy.
COMMUNITY FACILITIES	
Policies 8. Minimize potential impacts to Peñasquitos Lagoon by providing drainage facilities to control runoff, erosion and sedimentation.	*Potentially consistent - Highway/Rail.* See above discussion regarding Grading and Erosion Controls. Proposed project improvements would not adversely affect the functions of the SDG&E

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15. The planning and grading concepts should not adversely affect the functions of the SDG&E easements or the ability to maintain them. 16. Avoid unnecessary and expensive relocations of facilities.	easements or the ability to maintain them.
COMMUNITY DESIGN	
Grading Concept Design Guidelines 1. The visual impact of all hillside development shall be minimized, with buildings, retaining walls and other improvements approximating to the natural landforms. 2. Hillside sites offer opportunities to create outdoor decks, roof gardens, terraces, lookouts for viewing, sculptured stairs and other special characteristics and this shall be emphasized. However, development of hillside areas shall be screened from views beyond the plan area through the use of landscaping, setbacks and berming. 3. When attempting to separate incompatible land uses, landforms consisting of slopes and berms shall be used if possible. 4. All landform separations shall be appropriately landscaped with a combination of trees, shrubs and ground covers. 5. Coordination of screening and buffering efforts between adjacent projects is required to maintain the visual and vegetative continuity of materials. 6. Physical barriers such as solid walls or fences shall not be allowed in transition areas unless needed for noise attenuation. Open fences which do not obscure views may be employed within transition areas. 7. Low retaining walls may be used within transition areas to accommodate grade changes. Walkways and planting areas shall use small retaining walls and other stepping techniques to minimize graded areas. 8. Landscape treatments along transition areas between the project and the Los Peñasquitos Canyon Preserve shall employ native plantings to match existing plantings. 9. If berms are used for screening, they shall be large enough to not have a "dumped wheelbarrow" appearance. 10. Plant materials placed on any ridges or edges shall reinforce its natural profile and character. 11. Temporary ditches, dikes, berms or sandbagging shall be used to protect critical areas exposed during grading and construction.	*Potentially consistent – Highway.* The I-5 NCC project would preserve views of existing open spaces, lagoons, drainages or bluffs; however, certain proposed improvements that would alter existing visual resources include removal of existing vegetation and grading of adjacent landforms, new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining and sound walls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). Measures to minimize view impacts to natural features and visual resources include architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, and landscape screening of facility improvements. The project also includes opportunities to underground existing utilities where feasible reducing urbanized landscape/features. The highway project would include measures to screen and soften views of the improvements to blend with the surrounding environment, including sound wall planting pockets, terraced retaining walls, and landscaping to reflect the visual character and goals of the City. Generally, freeway landscaping would include noninvasive drought tolerant trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and

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12. Sedimentation basins shall be installed and maintained during development to remove sediment from run-off water. 13. Provisions (catch basins, drain inlets, etc.) shall be made to effectively accommodate increased runoff caused by changed surface conditions (paving, etc.) during and after development. Designs shall implement features which encourage groundwater recharge. Detention basins shall be designed to be natural in appearance. 14. Permanent planting shall be installed on slopes for erosion control as soon as practical during development activity. POLICIES 1. Slopes that are visible from surrounding communities shall be treated to imitate the natural topography. This can be accomplished through contour grading and is particularly appropriate in areas that are being revegetated with native plant species. 2. The top and toe of manufactured slopes should be rounded to make a natural transition to pad areas. 3. Recontoured slopes should be stabilized with appropriate plant materials to help reestablish the natural vegetative appearance. 4. Where soils and geologic conditions permit, utilize variable slope ratios to aid in achieving a more natural topography. 5. All grading operations shall be subject to strict erosion and siltation control measures that will protect the valuable lagoon environments downstream. 6. There should be close phasing of grading operations, slope erosion control measures and building construction to reduce the period when bare slopes are susceptible to erosion. 7. Individual projects shall be designed to preserve important natural topography, unique geologic formation and sensitive native vegetation to the fullest extent possible. 8. The height of cut and fill slopes should be minimized wherever possible, while varying the gradient of long horizontal slopes. 9. Permanent energy dissipaters and settlement/temporary catchment basins should be constructed, with the provision for regular, long-term maintenance. 10. A system of bladed ditches as flat gradients across larger, graded pad areas should be provided to allow on-site	shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The highway project would also potentially facilitate the goals of creating new community open space and/or vista points as parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City. *Potentially consistent – Rail.* The proposed rail improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize substantial encroachment into adjacent open space areas, or the need for substantial grading and landform modification that could otherwise disrupt the natural character of the land, water, vegetative, and wildlife resources in the area. Potential impacts to ground, surface and ocean water quality would be minimized through implementation of BMPs during all phases of the project, and stormwater BMPs would potentially enhance long-term water quality in the corridor through reduction of sediment loading into area waterways. Furthermore, implementation of the rail design and development strategies would ensure that specific rail facility projects minimize impacts to the natural environment to the greatest extent feasible.

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entrapment of silt during construction.	
Landscape Concept Design Guidelines Landscape plans shall be required for all developments within Torrey Hills. The design of these plans must comply with the City's Landscape Technical Manual. Provided below are specific guidelines which must be considered in preparing landscape plans. 1. Lawn may be used, but shall be limited to small areas for accent only, except in play fields. 2. Accent trees shall be used at locations that require special attention, such as entrances. 3. Decorative/enhanced paving should be used at major intersections, monuments and points of interest. Selection of decorative/enhanced paving should be similar to and reflect decorative paving used elsewhere in the community to create cohesiveness in design. 4. Slopes adjacent to native areas will be hydroseeded and planted with native plant materials compatible with existing vegetation. 5. All areas adjacent to the street which are planned as native hillsides and to be left undisturbed shall remain in a natural state. 6. Minor encroachments such as trails, trail staging areas and trail signage may be placed within natural open space. 7. Plant material located in the streetscape shall be consistent, simple and limited in variety. 8. Additional site amenities such as lighting and street furnishings shall be used where appropriate. 9. Entry monuments and project identification signs shall be located within this streetscape zone outside of the public right-of-way. Care must be given to integrate signage into the landscape environment of the streetscape. 10. Parking areas shall not usually encroach into the streetscape areas. 11. Where parking areas face a public street, they shall be screened from view using grade separations or dense shrub and tree planting. 12. Planting within parking areas shall be clustered in random, freeform arrangements, rather than distributed evenly in formal patterns. The freeform patterns will blend more effectively with the planting themes in the parkways.	*Potentially consistent - Highway/Rail.* The TREP/PWP improvements would include landscaping to screen and soften views of the facilities and blend with the surrounding environment. For example, sound wall planting pockets and terraced retaining walls would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the highway and rail corridors, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. In addition, opportunities to underground existing utilities would enhance visual resources and reduce urbanized landscape/features where feasible.

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13. Vines on trellis structures, columnar trees and shrubs, and insets for shadow relief should be used to soften the automobile and parking areas. 14. Specimen plant materials should be located at project entries and to highlight key architectural features. Highly visible community oriented slopes should receive container plant material, in addition to groundcover and hydroseed. POLICIES 1. All landscaping shall be consistent with the citywide landscape ordinance and Landscape Technical Manual unless specifically refined and enhanced through the planned development process. 2. Plant material used in revegetation and landscaping should reflect native vegetation in color and texture to provide continuity between natural and developed areas. 3. Planting shall be designed in a manner which effectively enhances existing views or provides new view corridor opportunities into the open space corridor, major landforms or other visual amenities within the project. 4. Plant materials shall effectively screen parking areas, utility enclosures, utility cabinets, service areas, or service corridors to reduce negative visual impacts when viewed from major streets.	
TRANSPORTATION	
Transportation System POLICIES 2. Incorporate into the Torrey Hills Community Plan the improvements that are required for the Torrey Hills area as a result of north San Diego traffic and transportation studies. 6. Promote alternatives to private vehicular travel, such as public transit and transportation demand management strategies, which can be integrated with the regional circulation network. 7. Support the provision of secure park-and-ride facilities in the vicinity of access points to the major regional transportation facilities. 8. Pursue development of a transportation system including use of bus, shuttle service, parkand-ride, bicycles, etc., which will be coordinated with regional systems and with neighboring systems. 9. Development of transportation facilities shall avoid unnecessary encroachment into environmentally sensitive areas.	*Potentially consistent – Highway/Rail.* The proposed improvements would be developed within existing ROW to the extent feasible, and through use of retaining and sound walls, would not significantly encroach into adjacent open space areas or landforms. The TREP/PWP's main intent is to improve the existing and future transportation operations in the north coast corridor for the safe and efficient regional movement of people and goods. The proposed improvements would preserve and enhance community character through sensitive design and community enhancement features. The proposed TREP/PWP would create and

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10. Pursue development of alternative transportation systems during the earliest stages of development to eliminate unnecessary traffic congestion and encourage the use of public transit and other transportation modes by future residents. 11. Coordinate with MTDB to expand transit services to Torrey Hills after the initial development is completed. 13. Convenient pedestrian linkages shall be provided from community activity nodes and adjacent land uses. 14. Clearly identify pedestrian access points to adjacent open space areas.	enhance features for an efficient and integrated transportation program by increasing rail and highway capacity and reducing congestion within the City and corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation. The I-5 project includes bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods and connect inland and coastal recreation use areas. The improvements would not result in closure or conversion of public accessways.
COASTAL ZONE POLICIES	
Residential 3. Where large-scale grading occurs, a sculptured technique should be used to blend fill and cut slopes with natural land contours. Any fill slopes adjacent to open space areas should be stabilized with appropriate native plant materials to help reestablish the natural biotic systems of flora and fauna. 4. Architectural design shall stress a blending of structures with the natural terrain. Architectural shapes, bulk, color, materials and landscaping must be carefully chosen to respond to the physical land constraints. Variety in structure design will increase the visual interest of a development.	*Potentially consistent - Highway/Rail.* The TREP/PWP does not include residential development. However, Caltrans and SANDAG would coordinate with the City and appropriate agencies as required to minimize and/or mitigate potential impacts from grading and fill slopes adjacent to open space and residential use areas to the maximum extent feasible.
Commercial 1. Of the approximately 94 acres of the Torrey Reserve commercial area, approximately 54 acres consisting of the bluffs at the very northern part of the community planning area and the steep slopes of the ridge immediately south of El Camino Real shall remain in open space. Of the approximately 35 acres permitted for development by the Local Coastal Program, approximately 25 acres shall be designated for commercial uses in the area immediately west of the bluffs (to include visitor-serving, financial, office, corporate headquarters, research and development and specialized commercial uses). 2. New development shall not obstruct public views of the scenic bluff escarpments.	*Potentially consistent - Highway/Rail.* The proposed improvements would not impact Torrey Pines State Reserve or substantially obstruct public views to and from the Reserve. The I-5 highway improvements along this area do not include sound walls and most improvements are setback over 1,000 feet from the Reserve. Although the LOSSAN rail improvements would occur within the Reserve, the rail improvements would be contained within the existing ROW, and therefore, would not encroach into undeveloped lands or obstruct public views of the Reserve.
OPEN SPACE AND RESOURCE MANAGEMENT	
POLICIES 1. The bluff escarpments south of Carmel Creek and east of El Camino Real, the steep slopes below the bluff escarpments and all planned riparian woodlands within the Carmel Valley Restoration and Enhancement Project shall	*Potentially inconsistent - Highway/Rail.* As the existing location and orientation of the I-5 and rail facilities necessitate that project development would

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be designated as open space and environmentally sensitive habitat areas and shall be protected against any significant disruption. Additionally, the steep natural slope areas outside Brush Management Zone 3 located below the planned Torrey Hills development adjacent to Los Peñasquitos Canyon Preserve shall be designated open space and environmentally sensitive habitat areas and shall be protected against any significant disruption. 2. No fill or permanent structures shall be permitted within the boundaries of the Carmel Valley Restoration and Enhancement Project unless such development is first authorized by the California Coastal Commission. 3. No development, other than trails and fencing authorized in the approved coastal development permit, shall be constructed within the 50-foot buffer adjacent to the Carmel Valley Restoration and Enhancement Project, unless such development is first authorized by the California Coastal Commission.	occur in or encroach upon areas of the Carmel Valley Creek corridor and the Los Peñasquitos Canyon Preserve. Accordingly, the improvements may not meet the minimum 50 foot buffer adjacent to the Carmel Valley Restoration and Enhancement Project. However, this policy provides for a reduced buffer if approved by the Coastal Commission. Caltrans and SANDAG are coordinating with the CCC and resource agencies to ensure the proposed projects are designed to minimize or avoid disturbances to fish and wildlife species and habitats, or otherwise avoid impairing the functional capacity of the resource. The improvements would minimize potential impacts to ground, surface and ocean water quality during all phases of the project through use of BMPs, and would potentially enhance long-term water quality in the corridor through reduced sediment loading of adjacent wetland/ riparian areas.
Grading 2. A grading plan that incorporates runoff and erosion control procedures to be utilized during all phases of project development shall be prepared and submitted…where such development is proposed to occur on lands that will be graded, filled, or have a slope of 25 percent or greater. Such a plan…shall be designed to assure that there will be no increase in the peak runoff rate from the fully developed site over the rate of discharge that would occur from the existing undeveloped site as a result of the intensity of rainfall expected during a six-hour period once every ten years (the "six-hour, ten year" design storm)._Runoff control shall be accomplished by establishing on-site or at suitable nearby locations catchment basins, detention basins, and siltation traps along with energy dissipating measures at the terminus of storm drains, or other similar means of equal or greater effectiveness.	*Potentially inconsistent - Highway/Rail.* Additional site- and project-specific assessment will be conducted in order to conclude whether there will be no increase in the peak runoff rate from the developed site compared to current conditions as a result of rainfall expected during a "six-hour, ten year" design storm.
COMMUNITY DESIGN	
POLICIES Steep Slopes 1. Approximately 58.5 acres of the Plan lying within the Coastal Zone consist of slopes of 25 percent grade and over, and have been identified as possessing environmentally sensitive habitats, significant scenic amenities or hazards to	*Potentially consistent – Highway/Rail.* See discussion under Community Design Grading Concept Design Guidelines, above.

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developments. These slopes are shown on Figure 20, Coastal Zone Steep Slopes. Development may occur in these areas provided the applicant can demonstrate all of the following: a. To protect the scenic and visual qualities of the site as seen from public recreational areas and highways, the proposed development shall minimize the alteration of natural landforms and create only new slopes that are topographically compatible with natural landforms of the surrounding area. b. Any previously manufactured slopes of the site shall be recontoured, if necessary, to make them compatible with surrounding natural landforms and native vegetation. c. The proposed development, including any fill or grading, does not create any significant new soil erosion, silting of lower slopes or stream channels, slide damage or other geologic instability, flooding, or permanent scarring. In reviewing the potential of any development to create or increase any such effects, official governmental soils maps, determinations of highly erodible soils, mapped active landslide areas, and similar documentation of geological instability shall be presumed to constitute rebuttable evidence and the applicant shall have an affirmative obligation to bring them to the attention of the City. Any decision by the City to override such evidence shall be based upon substantial evidence presented by a geotechnical expert licensed to practice in California. All liability for the accuracy of the geotechnical information presented on behalf of the applicant shall be assumed by the applicant, who shall also be required in writing as a condition precedent to issuance of the Coastal Development Permit to address and fully mitigate or otherwise correct any geologic instability, erosion, or sedimentation caused by the permitted development on other private or public properties and off-site coastal natural resources. Failure by an applicant to provide geotechnical or other engineering responses to such identified geological instabilities shall constitute grounds for denial of the development. d. The proposed development contains a native vegetation restoration and enhancement program for those portions of the site in 25 percent or greater slopes that will provide as follows: (1) For every area or quantity of native vegetation located on natural slopes of 25 percent grade and over, in excess of the encroachment allowance provided on Table 5, 25 Percent Slope Encroachment Allowance, that is disturbed by the development, an area equal to 120 percent of the disturbed area shall be restored in native vegetation. The restoration and enhancement program shall be performed prior to or concurrently with the development and may be incorporated into the design and implementation of the overall landscaping program for the site. (2) The native vegetation restoration and enhancement program required by subsection (a) shall be located on the site of the permitted development. However, if the size, topography or biological characteristics of the site are determined by the Planning Director to be unsuitable for said restoration or enhancement program, then the native vegetation shall be provided at one or more off-site locations within the Coastal Zone, which may include publicly owned right-ofways. If such locations within the Coastal Zone are not practicable, then such native vegetation restoration or enhancement program shall be provided at other suitable locations within the City of San Diego outside the Coastal Zone.	Additional opportunities for coastal visual resources could include replacement of existing bridge structures which, due to their age, are relatively dense in form and mass and presently block views to the ocean and/or inland areas. TREP improvements that would replace and update bridge structures could open the viewshed in some of the lagoon areas with new bridge designs that minimize support structures and, thus, reduce the visual mass of the structure and provide a more visually permeable design. Site- and project-specific analysis of potential habitat impacts will be conducted to evaluate potential consistency with all requirements of this policy.

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(3) All native vegetation restoration and enhancement programs shall be prepared by a biologist, registered landscape architect, or other qualified professional in close consultation with the Department of Fish and Game and U.S. Fish and Wildlife Service. 2. In the case of those natural landforms which consist of slopes of 25 percent and over which have been identified as possessing environmentally sensitive habitats or significant scenic amenities or hazards to development (including major undeveloped sites with high erodibility characteristics), the following requirements shall apply: a. Slopes of 25 percent grade and over shall be preserved in their natural state, provided a minimal encroachment into the steep slope areas over 25 percent may be permitted as set forth on Table 5. The following uses shall be exempt from the encroachment limitations set forth on Table 5. ➢ Major public roads and collector streets identified in the Circulation Element of an adopted community plan or the City of San Diego Progress Guide and General Plan. ➢ Local public streets, private roads and driveways which are necessary for access to the more developable portions of a site on slopes of less than 25 percent grade, provided no less environmentally damaging alternative exists. The determination of whether or not a proposed road or driveway qualifies for an exemption, in whole or in part, shall be made by the Planning Director based upon an analysis of the project site. ➢ Public utility systems. b. On existing legal parcels, a deviation in the encroachment allowance percentage may be granted by the Planning Director, if necessary to maintain a minimum development right (total disturbed area) equal to 20 percent of the entire parcel. c. All encroachment allowances, including permissible deviations, shall be subject to a determination by the Planning Director that such encroachment supports the findings of fact set forth in the City's Hillside Review Zone. d. For purposes of determining allowable encroachment, only that portion of a parcel or ownership lying within the coastal zone shall be used in the calculation. 3. Encroachment allowances for the development of slopes of 25 percent grade and over occurring on either slope category described in paragraphs “1” or “2” above, shall not be transferable between categories. 4. All natural slopes of 25 percent grade and over which remain undisturbed or which are restored or enhanced as a result of a development approval shall be conserved as a condition of permit approval through a deed restriction, open space easement or other suitable device which will preclude any future development or grading of such slopes. Landscaping 1. Within perimeter areas of development, landscaped buffers shall be provided to screen views of development from Los Peñasquitos Canyon Preserve.	

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2. Landscaping in areas adjacent to Los Peñasquitos Canyon Preserve shall utilize native and/or drought tolerant, non-invasive plant material. 3. Landscaping and brush management shall comply with the Landscape Technical Manual (November 1989) unless specifically modified through an amendment to the Local Coastal Program. Utilities 4. Local utility distribution shall be underground in all new developments, whenever feasible.	

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LAND USE	
Guiding Principles 3.1e Integrate facilities for non-automobile travel into the NCFUA transportation system, and support alternatives to automobile use through land use and urban design principles. 3.1f Limit adverse impacts on surrounding communities by providing needed public facilities within the NCFUA, coordinating planning with surrounding areas, and restricting land use intensity to avoid severe traffic impacts in neighboring communities. 3.1g Include in the NCFUA public facilities that will be needed by area residents, in order to meet their needs, to provide for convenience and community identity within the NCFUA and to minimize impacts on services outside of the NCFUA. 3.1h Implement Framework Plan principles through preparation of a series of subarea plans that conform to the Framework Plan, provide needed detailed studies, and are coordinated with other planning efforts undertaken by the City, San Diego County, SANDAG and other public agencies	*Potentially consistent – Highway.* The TREP/PWP's main intent is to improve the existing and future transportation operations in the north coast corridor for the safe and efficient regional movement of people and goods. The proposed project would reduce congestion, increase capacity, and enhance multi-modal travel options to coastal and inland recreation use areas within the corridor while protecting and enhancing community character with sensitive design and community enhancement features. The project also includes bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods and connect inland and coastal areas. The project would be implemented within existing ROW to the greatest extent feasible, and through use of retaining walls, as needed, would reduce further encroachments into adjacent land uses. *N/A – Rail.*
URBAN DESIGN	
4.2 Implementing Principles: Mixed Use Community Cores 4.2b Clear pedestrian, bicycle and transit access must be provided to the community core from the core residential and peripheral residential areas. ➢ The community cores should contain dedicated transit right-of-ways for bus or light rail service providing access to the regional transit system. Where feasible, local feeder bus or shuttle service should be provided to connect the residential areas with the community core. Development of a local transit center where trunk line and feeder bus service connect is encouraged and should be located in the community core adjacent to commercial services.	*Potentially consistent – Highway.* See discussion above. *N/A – Rail.*
4.3 Implementing Principles: Core Residential Areas 4.3d Major arterial streets should be designed for less traffic capacity than is the current practice in the City and county. Instead, more choices of alternative routes within the community should be provided. This pattern creates more smaller collectors, instead of high-speed arterials. This slows traffic speeds and reduces the need for noise attenuation walls.	*Potentially consistent – Highway.* The proposed project includes improvements to local roadways, as well as new bicycle and pedestrian facilities and routes that connect to public transit centers, link neighborhoods and provide access to coastal and

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	inland recreation use areas. *N/A – Rail.*
4.9c Outside the compact communities, the street edge should be designed to retain existing natural features and limit site improvements to landscape elements. ➢ Retain existing land forms, mature trees, and important rock outcroppings. The locations of driveways and utilities should avoid destroying important natural features. ➢ Where streets cross the open space system, bridge structures should be used to cross canyons (Figure 4-12b). ➢ Minimize the use of sound attenuation walls by careful site planning that employs grade changes, berms and landscape elements to provide acoustical and visual privacy. ➢ When sound attenuation walls must be used, they should not be visible from major arterial and collector streets. This may be accomplished by use of grade changes, berms and/or planted buffers between the wall and street, with a width of 50-100 feet recommended for the buffer.	*Potentially inconsistent – Highway.* Proposed improvements would result in removal of existing vegetation and grading of existing landforms, as well as construction of new retaining and sound walls that would be visible from area roadways, and could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). Although improvements would be contained within existing ROW to the extent feasible, buffers may not be met due to the existing location and orientation of the highway; retaining walls are proposed to further reduce encroachment into adjacent land uses. However, the project would landscape the I-5 NCC improvements to screen and soften views of the walls and facilities for compatibility with the surrounding environment, including sound wall planting pockets and terraced retaining walls that reflect the visual character and goals of the City. Freeway landscaping would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover and, in less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *N/A – Rail.*
4.I0a Where it is necessary to floodproof a property, require the least possible alteration of the natural drainage pattern, and minimize impacts to downstream properties. ➢ Within the 100-year floodplain fringe of the San Dieguito River, fill for roads and other public improvements and/or permanent structures will be permitted only if such development is consistent with the policies detailed in the North	*Potentially consistent – Highway.* The project is potentially consistent with provisions of this policy that address fill in the 100-year floodplain for roads and other public improvements, although certain North City LCP policies may not be met if strictly

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City Local Coastal Program (LCP). 4.I0b Protect existing drainageways from encroachment that might affect drainage patterns or water quality through the use of setbacks/buffers (open space buffers described in Section 5 may serve this function). 4.I0c Development in hillside areas should conform to the unique natural setting of each area and site, retaining the character of existing landforms and preserving significant native vegetation. ➢ Within the coastal zone, the grading of landforms that consist of slopes of 25 percent grade or more shall be strictly limited and shall only occur if the applicant demonstrates consistency with the applicable policies in the North City Local Coastal Program (LCP). Runoff and erosion control procedures shall be utilized during all phases of project development. 4.10e The development pattern in hillside areas should be designed so that structures do not stand out prominently when seen from a distance. 4.I0f Development should not obstruct public views. 4.I0g In conjunction with project proposals, disturbed areas on a site which are to be retained as open space shall be contoured to blend in with natural slopes and shall be revegetated with native plants. 4.I0h Mass grading shall be avoided. Grading will be limited to the building footprint, accessory uses, and access corridors essential to the development of the site. 4.I0i Development adjacent to ridges and bluffs shall minimize visual impacts to these topographic features through setbacks and landscaping, especially near major canyons or valleys. 4.I0j New development shall be required to minimize erosion. 4.I0k New development shall not cause an increase in the peak runoff rate when compared with storm runoff under existing conditions. 4.10l Structures located within the view of the park, if within 200 feet vertically and 50 feet horizontally of a ridgeline, shall be set back and be low in profile so as not to be visually prominent from the future park.	applied due to the existing location and orientation of the highway facilities (see policy discussions throughout this Community Plan Area). Project improvements would encroach on slopes of 25% or greater natural gradient, which may increase the potential for erosion caused by grading. However, soils and geotechnical studies currently document the project will not adversely affect hillside or soil stability, and measures are proposed to reduce the potential for erosion-related impacts, including vegetative groundcover on cut and fill slopes, landscaping and BMPs throughout all phases of construction and operations. The project would preserve ocean views and views of existing open spaces, lagoons, drainages or bluffs; however, improvements would alter the visual environment through the removal of existing vegetation and grading of adjacent landforms, new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining walls and/or sound walls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). Measures proposed to reduce visual impacts include landscaping improvements to screen and soften views and for compatibility with the surrounding environment, as well as architectural details such as sound wall planting pockets and terraced retaining walls to reflect the visual character and goals of the City. The project includes opportunities to facilitate the development of new open space and vista points through consideration of parcels, in whole or in part

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4.10m The facades of structures shall be angled at varying degrees to follow the natural topography of the site. 4.I0n All exterior lighting shall be a low-sodium type with horizontal cut-off and shall be shielded downward such that the light would not be visible to the adjacent properties and the proposed park. 4.10o Rooflines shall vary in angle and height to provide a changing profile.	that are purchased for freeway widening but not required for use as permanent State ROW, being converted to community pocket parks or public open space at the request of the City. The proposed project would also minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation of BMPs, which could reduce sediment loading into adjacent wetland/riparian areas. *N/A – Rail.*
OPEN SPACE	
5.1: Guiding Principles: Open Space 5.1a Create the environmental tier, an interconnected, viable system of natural open space that serves to protect and conserve cultural resources, flora and fauna that occur in the NCFUA. 5.1b Conserve biological diversity by setting aside relatively large areas of natural open space/habitat, linked with corridors, and protected from human activities detrimental to this purpose. 5.1c Preserve floodplains and significant topographic features such as canyons, ridges and hillsides.	*Potentially consistent – Highway.* See discussion above. *N/A – Rail.*
5.2: Implementing Principles: Delineation of Final Environmental Tier Boundaries 5.2a The environmental tier shown in the Framework Plan diagram may be reformed during subarea and project planning provided such refinements are consistent with the principles of this section. 5.2b All linear corridors in the environmental tier must be a minimum of 1/8 mile in width. This may include some transitional areas which permit recreational activity. 5.2c Changes to linear corridors in the environmental tier will be allowed as part of subarea plans only if all of the following guidelines are satisfied: ➢ Linear corridors may be moved to another location as long as opportunity for wildlife movement is equivalent to the	*Potentially consistent – Highway.* The proposed improvements would be developed within the existing highway corridor ROW to the extent feasible, and through strategic use of retaining and sound walls, would not significantly encroach into adjacent open space areas or landforms. The TREP/PWP's main intent is to improve the existing and future transportation operations in the north coast corridor for the safe and efficient regional movement of people and goods. The proposed improvements would preserve and

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opportunity provided by the corridor shown on the Framework Plan diagram, and the new location provides for as much or more width, native plant habitat, ability for cover, and protection from human activity as the previous location. The corridor must have the same geographic relationship to open space areas being connected, whether they are in or outside of the NCFUA. ➢ The new location must be in as much of a direct line to the major open space areas as the previous location, with no bottlenecks, winding curves or turns that might inhibit wildlife movement. ➢ If native habitat is not present or is in a degraded state in the new corridor, the corridor must be revegetated. ➢ If the designated corridor has sensitive resources that should be preserved on site, changing the location may not be allowed. 5.2d Because of the importance of continuous open space that provides for plant and animal movement, portions of the environmental tier may not be eliminated based solely on an absence of sensitive resources within the area designated. Function as an open space corridor or groundwater recharge area may be sufficient to warrant inclusion in the environmental tier. 5.2e Whenever possible, preserve 100-year flood zones as open space. Where it is necessary to floodproof a property, require the least possible alteration of the natural drainage pattern, and minimize impacts to downstream properties. 5.2f Where feasible, "additional sensitive lands" shown on Figure 5-1 should be preserved as open space through the site planning process. If preservation is not possible, uses permitted in transition areas would be appropriate (see Table 5.4-A). 5.2g Where feasible, the environmental tier should incorporate entire geographic and topographic features (i.e., canyons and drainages shall be preserved from rim to rim or edge to edge).	enhance community character through sensitive design and community enhancement features. *N/A – Rail.*
5.4 Implementing Principles: Enhancement and Management of Environmental Tier Lands 5.4a As part of subarea and project planning, environmental tier lands are to be divided into management zones. The zones are defined as follows, with allowable and prohibited uses identified in Table 5.4-A. The open space management zone concept is illustrated in Figure 5-2. Habitat Protection Areas. These areas serve to protect and preserve natural resources throughout the NCFUA, providing for habitat and movement needs of the native plants and animals. The environmental tier lands shown on the Framework Plan diagram are, for the most part, expected to be designated as habitat protection areas (see policies in Section 5.2 relative to changes in environmental tier delineation). No non-local native vegetation shall be allowed to be planted within these areas. Local native vegetation, if unavailable	*Potentially inconsistent – Highway.* The TREP/PWP would provide for no net loss of wetland and ESHA, as well as in-kind preservation of habitat or out-of-kind habitat enhancement that would result in significant improvement to natural ecosystems throughout the corridor. Given the existing location and orientation of the highway facility, it may not be possible to provide the specified minimum 100 foot buffer from native habitat areas. The project is designed to maintain natural buffers between the corridor and adjacent

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from on-site, can be obtained from sites with similar soils, slope, aspect, meso- or micro-climates as those on-site, preferably from nearby local sites within a ten-mile radius of the site. Biological Buffer Areas. These are areas of native habitat where low-impact forms of recreation can occur (such as trails), but which primarily function to provide distance and protection to the habitat protection area from lights, noise, activity, exotic plants and other potential forms of disturbance. Buffer areas will generally be created at the perimeter of development areas shown on the Framework Plan diagram, and shall be a minimum of 100 feet wide. No non-local native vegetation shall be allowed to be planted within these areas. Local native vegetation, if unavailable from on-site, can be obtained from sites with similar soils, slope, aspect, meso- or micro-climates as those on-site, preferably from nearly local sites within a ten-mile radius of the site. Transition Areas. These are areas outside of the Buffer and Habitat Protection areas, used for landscaped transitions to developed areas. These areas should generally add an additional 25-50 feet of distance between the open space system and developed areas, in order to provide for the transition from native habitat to the generally non-native, developed areas. Local native vegetation should be used as much as possible; introduced drought-tolerant species may also be acceptable. These areas can provide for trails for pedestrian, bicycle, or equestrian uses. Transition areas shall use native or drought-tolerant, locally adapted plant species that serve to provide a smooth visual and functional transition between the native buffer zone and landscaped areas. Transition areas should prevent detrimental animal and plant species from invading the buffer and habitat areas, and to additionally protect those areas from the impacts of lighting or noise (especially if the buffer zone is sage scrub). Transition areas shall not be planted with non-native species invasive to the habitat or buffer zones. 5.4b In addition to the three management zones described in Principle 5.4a, subarea and project plans should identify areas of open space that provide natural components to more developed areas and link to the open space system. These will be within development areas shown on the Framework Plan diagram, and should be delineated using the Open Space Composite diagram (Figure 5-1). Activities within these areas may be restricted to emphasize habitat preservation, or may allow community gardening, golf courses, hiking, biking, and equestrian use. 5.4c Wildlife corridors shall be the width required to provide for a continuous space in which animals can move without fear, undisturbed by lighting, noise and intense human activity. The corridor should provide fully functional indigenous habitat throughout. (A minimum width for major wildlife corridors shall be 1/8 mile.) 5.4d Development projects subject to the Resource Protection Ordinance will be required to conform to the ordinance	land uses to the greatest extent feasible. Where minor encroachments into wetland areas are proposed, the project is designed minimize disruption to marine and wildlife habitats and biological viability. See also discussions above regarding landscaping and visual design measures, and implementation of BMPs for potential water quality impacts. *N/A – Rail.*

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and to subarea plans. When strict compliance with the ordinance is infeasible, mitigation will be required. Subarea plans must describe how mitigation will be accomplished. The preferred form of mitigation will be the purchase and dedication of land on Del Mar Mesa. Purchase of land shall occur at the project approval stage, and purchases will be market transactions between property owners. 5.4e Wildlife corridors shall not have trails and recreation allowed within them where that activity might impede animal movement or other faunal needs for breeding, nesting, foraging, resting, etc., or otherwise detrimentally affect the corridor's function. Recreational trails are permitted in buffer and transition areas, and in natural/urban amenities depicted on Figure 5-1. 5.4f No concrete, asphalt, riprap, or other channelization structures will be allowed within the open space system's drainage areas or floodplains. Floodplain banks will be revegetated with appropriate native species (riparian scrub or woodland, chaparral, or sage scrub), restoring drainage areas and floodplains to fully functional ecosystems. 5.4g Water retention areas and ponded runoff filtering systems may be allowed in portions of the open space system. No water entering the open space system through storm water runoff pipes and facilities shall enter at a speed causing erosion or other detrimental effects to the natural ecosystem. Drainage areas shall be thickly vegetated with native species to prevent erosion and to help filter water. Check dams and sedimentation ponds may be placed within the buffer or transitional areas, to slow water entering as urban runoff, and to catch sediments and help filter water.	
5.5 Implementing Principles: Roads in and Adjacent to the Environmental Tier 5.5a Where it is essential that a road cross the environmental tier, bridge structures shall be required to provide unobstructed wildlife corridors. Structures should be designed and built to minimize the need for alteration of natural landforms. 5.5b Road crossings of the environmental tier are to be limited to the roads shown on the Framework Plan diagram and collector streets essential for area circulation. Local streets should not cross the environmental tier except where needed to access isolated development areas or in areas shown as urban/natural amenities in Figure 5-1. Subarea transportation planning must minimize environmental tier crossings. 5.5c Filling of canyons or valleys shall be avoided, and roads shall not be placed in the bottom of canyons or be allowed to act as barriers or impediments to wildlife movement or the survival of native species. 5.5d Where roads enter and traverse portions of the open space system, provisions shall be taken to provide for wildlife movement across the road a minimum of once every 1/2 mile. Where flat terrain is encountered, an overhead structure for animal crossings may be constructed. A prototype might be built and monitored to see if it is viable as mitigation for road impacts. This structure would be moderately sloping (no steeper than 3:1), with soil and native plant cover, and	*Potentially consistent – Highway.* Proposed new bridge structures or upgrades to existing bridges spanning waterways, lagoons and ESHA would be designed to facilitate wildlife movement, and could be improved to provide for use by pedestrians where warranted. The project would not result in fill of canyons or valleys. *N/A – Rail.*

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fenced. 5.5e Roads shall be narrowed when they cross the open space system, at a minimum to eliminate parking, turn lanes and median strips. Where topography and resource sensitivity permit, bicycle and pedestrian ways should be within the environmental tier rather than comprising a portion of the road structure. This will both reduce the width of structures and provide a more interesting experience for bicyclists and pedestrians. 5.5f Roads which cross the l00-year flood plain shall be constructed above grade, using bridge or causeway structures.	
TRANSPORTATION	
6.1 Guiding Principles: Transportation 6.1a Design and construct the NCFUA transportation system so that it will not result in severe impacts to adjoining communities. Development in the NCFUA will add trips to streets in surrounding communities. The Framework Plan has been designed to keep impacts to an acceptable level. 6.1b The circulation system shall be designed to meet regional transportation needs by providing major links between existing and planned roads in surrounding communities and jurisdictions. 6.1c Create a land use and circulation pattern that supports multimodal travel habits for people living and working in the NCFUA. Give preference to transit on congested road segments. 6.1d Control the impact of roads on environmental tier lands by minimizing the number of road crossings of open space and requiring bridge structures to be built in order to allow continuous areas for movement of flora and fauna (see open space principles in Section 5.5).	*Potentially consistent – Highway.* The TREP/PWP improvements would increase capacity, reduce congestion, and provide for multi-modal travel options to access coastal and inland recreation use areas located along the I-5 north coast corridor. Interchanges, overcrossings, and undercrossings would be reconfigured within the City to improve traffic, pedestrian and bicycle travel modes. Community enhancement features would also provide and/or improve pedestrian and bicycle facilities and provide linkages to public transit centers and recreational use facilities, thereby facilitating connectivity between inland and coastal communities. *N/A – Rail.*
6.2 Implementing Principles: Road Alignments The Framework Plan diagram shows generalized road alignments for major roadways. 6.2b Road alignments shown on the Framework Plan diagram will be refined based on subsequent studies. Limitations on the extent to which road alignments are permitted to deviate from the Framework Plan diagram are as follows: ➢ Arterial streets shall border mixed-use community core areas, not dissect them so that the cores can be served by a secondary, pedestrian-oriented street system. ➢ All road segments must continue to serve the same development areas and land uses as are shown on the diagram. ➢ The relationship among NCFUA road network segments may not be changed.	*Potentially consistent – Highway.* Although the I-5 NCC project would be constructed within existing ROW to the extent feasible, due to the existing orientation and location of the facility, encroachments into adjacent lands would potentially result in the loss of open space and natural resources. Retaining walls are proposed to reduce encroachments where feasible. In addition, the proposed project includes design features to minimize the need for earthwork and potential impacts to natural resource areas. Caltrans and

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➢ Because of the anticipated environmental impact of freeway interchange construction, and Caltrans interchange spacing requirements, the number of interchanges on SR-56 within the NCFUA shall remain at two. Their precise locations are to be determined by subsequent studies. 6.2c Alignments should seek to minimize the need for earthwork and should minimize habitat impacts. Intersections and interchanges should be located outside of the environmental tier whenever possible. 6.2d Road crossings of the environmental tier are to be limited to the roads shown on the Framework Plan diagram and collector streets essential for area circulation. Local streets should not cross the environmental tier, except in areas shown as Urban/Natural amenities in Figure 5-1, which may be crossed if necessary.	SANDAG would coordinate with the City and/or responsible agencies as required to ensure potential impacts are minimized and/or mitigated to the maximum extent feasible consistent with this policy. *N/A – Rail.*
6.4 Implementing Principles: Non-Motorized Transportation 6.4a Subarea planning and design of development projects should emphasize facilities for pedestrians and bicycles that are safe, direct and attractive. 6.4d When roads cross the environmental tier and topography permits, pedestrian and bicycle ways should be separated from the road in order to reduce the width of bridge structures and to provide pedestrians and bicyclists with a more appealing open space crossing.	*Potentially consistent – Highway.* New or improved interchanges and pedestrian overcrossings/undercrossings would reduce vehicle and pedestrian/bicycle conflicts to the extent feasible. Community enhancement features would also provide and/or improve pedestrian and bicycle facilities to link across I-5 with public transit centers and recreational facilities, thereby improving and facilitating connectivity between communities. *N/A – Rail.*
6.5 Implementing Principles: Transit and High-Occupancy Vehicles 6.5g The North City West Community Plan designates a regional transit terminal at El Camino/Del Mar Heights Road. The NCFUA transit service should connect with this and other links to the regional transit network. 6.5h Practical and convenient alternatives to the automobile shall be provided at the time of need through the provision of transit stops, buses, signage and other improvements.	*Potentially consistent – Highway.* The TREP/PWP's main intent is to improve the existing and future traffic and rail operations in the north coast corridor by increasing capacity, reducing congestion, and providing for increased multi-modal transit options that facilitate higher occupancy vehicle or public transit use. The proposed improvements would also improve access to coastal and inland recreational use areas through enhanced pedestrian circulation and bicycle facilities and routes linking coastal and inland communities across I-5. *N/A – Rail.*

2. City of Del Mar

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CHAPTER II – LAND USE DEVELOPMENT	
B. Land Use Development Goals and Policies – General GOAL II-A Preserve and enhance Del Mar's small own atmosphere with its harmonious blending of architecture, landscape and natural landforms in proximity to a beautiful shoreline. Policy II-1: Maintain the existing small-scale character of the community and permit only one- and two-story, low intensity development with a maximum allowable height of 26 feet. Policy II-2: Insure that future development, whether commercial or residential, retains the aesthetic quality of the community by protecting and preserving public views to the ocean and other significant natural resources; and by minimizing the disturbance of natural topography and vegetation. GOAL II-B Focus major retail and office activity into an economically viable, pedestrian-oriented area that serves the needs of both residential and visitors. Policy II-7: Locate visitor-serving facilities, including public and private developments that provide food, services, shopping and amusement, within easy walking distance of visitor lodging. Focus beach oriented commercial/recreational activities within easy walking distance of the beach, other park areas and public transportation facilities.	*N/A – Highway.* *Potentially consistent - Rail.* The project has been designed to retain significant natural features where feasible, and public views to the ocean would be retained. However, the LOSSAN Rail Corridor project includes various improvements that would result in removal of existing vegetation and grading of existing landforms to accommodate the construction of new tracks, a platform station, and potentially shoreline stabilizing activities that may block and/or alter existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). However, with the exception of the proposed Del Mar Fairgrounds platform station and shoreline stabilizing activities, the proposed track improvements would occur within existing railroad right-of-way (ROW) and involve at- or below-grade facility improvements that would be generally consistent with existing facility improvements and the surrounding environment. The proposed project also includes a number of recreational trail and bicycle improvements intended to support public access to recreation areas, beach and visitor-serving support facilities, and low cost recreation.
C. Land Use Development Goals and Policies – By District 10. Railroad Right of Way (RR): The AT & SF Railway right of way runs north/south through the City and several of the individual districts described above. The uses allowed in the RR designation are rail transportation facilities and associated structures with the receipt of a Conditional Use Permit. The existence of the open rail corridor provides the opportunity for expansive views from areas to the east and maintains a continuous open space strip through the City. In the event that the rail transportation route is modified or rerouted to a different location, the existing right of way should be reassigned with a land use designation which reflects the existing open space character of the right of way. The RR area runs adjacent to and through a number of sensitive resources including coastal bluff areas and wetlands. All new development and expansion of existing facilities within the RR designation shall be consistent with policies of this Land Use Plan.	*N/A – Highway.* *Potentially inconsistent – Rail.* Along the existing rail corridor, proposed rail improvements would be consistent with the applicable land use designation. However, proposed rail improvements would result in minor development encroachment into adjacent wetland and sensitive habitat areas, and buffer/transition areas for transportation facilities, potentially inconsistent with the permitted uses identified in the Land Use Plan.

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CHAPTER III – HAZARD CONTROL	
B. SHORELINE HAZARDS GOAL III-A Establish a comprehensive program to protect shoreline areas susceptible to storm/flooding hazards. Policy III-1: Protect open space areas as shown on the Del Mar Environmental Management Plan (see Appendix D) through the implementation of the policies of Chapters II and VI of this Land Use Plan. The policies of these Chapters are intended to assure the application of development criteria necessary to preserve the open space sensitivities of the property as described in the Open Space Goals and Objectives on pages 31-32 of the Environmental Management Element of the Del Mar Community Plan. Policy III-2: Conserve the natural character of land, water, vegetative and wildlife resources within the community by ensuring that future development minimizes the disturbance of existing or natural terrain and vegetation, and does not create soil erosion, silting of lower slopes, slide damage, flooding problems and/or cutting or scarring, through application of the following policies: a. Regulate development in accordance with the specific Beach (BOZ), Floodway (FW) and Floodplain (FP) Overlay Zone regulations contained within this chapter. b. Review all proposed drainage and irrigation systems for their ability to control runoff and seepage into downstream areas and to ensure that no significant erosion or the associated siltation of downstream resources will occur. For purposes of this Land Use Plan, "significant erosion" shall mean the likelihood of removal of soil or the cutting, scarring, or rilling of slopes, canyons, or bluff faces, or the silting of lower slopes brought about by runoff from surfaces during irrigation or from rainfall of an intensity and duration less than or equal to that of the 100-year period design storm. c. Regulate development in proximity to coastal bluffs in accordance with the Coastal Bluff Regulations contained within this chapter. d. In addition to the requirements of the Coastal Bluff regulations of this chapter, require the use of drought-tolerant plants in new and redevelopment projects throughout the City in order to minimize potential erosion impacts from irrigation systems and to reduce water consumption. Policy III-3: Control the development of properties within the Bluff, Slope and Canyon (BSC) Overlay Zone to protect the health, safety and general welfare and to preserve scenic sandstone bluffs, related canyons, steep slopes and their downstream resources. The regulations of the BSC Overlay Zone are cited in Chapter VI of this Land Use Plan entitled, "Sensitive Lands". Policy III-4: If so designated in the Open Space element of the Community Plan, the development review for a project located on a site within the Open Space Overlay Zone shall be stayed for a period of time necessary to enable residents of the area to form an assessment district for the purchase of such area for the purpose of retaining the area as natural open space. However, in no event shall the stay of action for such acquisition purposes exceed a one-year period from the time of filing the first permit authorization required for the development of said property. This one year period may	*N/A – Highway.* *Potentially consistent – Rail.* The proposed rail facility track improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize encroachment into adjacent open space areas, and the need for excessive grading and landform modification that could otherwise disrupt the natural character of the land, water, vegetative, and wildlife resources in the area. The proposed rail facility project would also minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The project would include Best Management Practices (BMPs) to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/minimized through the use of Construction site BMPs while the long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. Additionally, the proposed project includes a number of recreational trail and bicycle improvements intended to support public access to recreation areas, beach and visitor-serving support

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be extended with the written consent of the applicant/owner. Said extension(s) shall not be counted towards the review periods specified in California's Permit Streamlining Act. Beach Hazards/Public Access Policies: Goal III-A, Policy III-5: Continue to study and implement shoreline management and replenishment programs applicable to the Oceanside littoral cell through participation in the activities of the regional organizations and agencies including the Beach Erosion Action Committee (BEACh). Goal III-A, Policy III-6: Minimize the loss of life and destruction of property from seismic, geologic, oceanographic and weather related causes by developing a well coordinated disaster plan which includes preparation for earthquakes, tsunamis, and storm waves. Goal III-A, Policy III-7: Promote public safety, health and welfare, and provide for the protection of private property while protecting public access opportunities to and along the beach through the enforcement of the provisions of the Beach Preservation Initiative as incorporated into the following Beach Overlay Zone Regulations. These regulations reflect a balance of the need to minimize risks and protect property and the desire to maximize public access opportunities. The following regulations of the Beach Overlay Zone are cited in their entirety here, in this Hazards section. However, because many of the regulations do reflect the maximization of public access opportunities, they are also referenced in Chapter IV entitled, "Coastal Access". BEACH OVERLAY ZONE REGULATIONS 1. Purpose. The Beach Overlay Zone, created by initiative, is included as a part of this Land Use Plan in order to regulate the uses of the Del Mar beach area, a distinct and valuable natural resource, for the benefit of present and future generations. The regulations contained herein shall be administered so as to protect public access to and along the shoreline, while promoting public safety, health and welfare, and providing for the protection of private property. 3. Permitted Uses. Permitted uses within the Beach Overlay Zone shall be those allowed in the underlying Zone and Land Use designation, subject to the regulations contained in the Beach Overlay Zone which shall prevail in the event of conflict with any other provisions of the City Zoning Ordinances (hereinafter: City Code) or this Land Use Plan. a. "Shoreline Protection Area", shall mean that area which is within the Beach Overlay Zone and is located from south to north along the shoreline of the City being more particularly described as follows: All lands located westerly of the line as described in Figure II-B, incorporated herein by reference. 4. Development within the Shoreline Protection Area. No development shall occur within the shoreline area except such privately owned protective structures, publicly owned protective structures and publicly owned development authorized, constructed and maintained in accordance with the regulations set forth in the Del Mar Municipal Code and this Land	facilities, and low cost recreation.

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C. COASTAL BLUFFS GOAL III-B Preserve Del Mar's fragile coastal bluffs as a visual resource and avoid the risks to life and property associated with bluff failure and shoreline erosion. Policy III-9: Where a proposed development would lie at the top of, or in proximity to a coastal bluff, the Coastal Bluff regulations cited below and on subsequent pages shall apply. For purposes of this Land Use Plan, a coastal bluff is defined as a steep escarpment with a slope gradient equal to or greater than an average of one foot vertical to one foot horizontal and vertical rise of 15 feet or more, and which is located in an area that is periodically subject to ocean wave action. The areas of the City of Del Mar in which coastal bluffs are located are shown on Figure III-C. As shown on this Figure, the manufactured cut slope which follows the eastern edge of the AT&SF Railway Right of Way between the City's southern boundary and 15th Street is not considered to be a coastal bluff. Therefore, the properties which lie to the east of such manufactured cut slope are not subject to the following coastal bluff regulations. <u>COASTAL BLUFF REGULATIONS</u> a. A minimum setback of 40 feet from the edge of the coastal bluff top shall be provided in the construction of all principal structures and all accessory structures, such as, but not limited to: pools, spas, storage sheds, gazebos and above grade decks or patios. All new additions to existing structures shall maintain the minimum 40-foot coastal bluff top setback required herein. This requirement shall also apply to the construction or installation of new supporting foundations or other structural supports for existing structures. A lesser setback of a minimum 10 feet from the edge of the coastal bluff top shall be allowed for associated improvements such as fences, windscreen and benches, provided such improvements are constructed above grade with the use of light weight materials and without the use of grading and/or continuous foundation components. No grading shall be allowed within a minimum setback of 40 feet from the top edge of the coastal bluff top. No grading or construction activities shall be allowed on the face of a coastal bluff unless approved as part of a Shoreline Protective Permit or Setback Seawall Permit issued in accordance with the provisions of this Land Use Plan and when such activity on the bluff face has been minimized to the maximum extent feasible necessary to provide the authorized shoreline protection.	*N/A – Highway.* *Potentially consistent - Rail.* The proposed rail improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize the need for excessive grading and landform modification that could otherwise impact the Del Mar coastal bluffs. See also discussion under B. Shoreline Hazards, above. Furthermore, the majority of conceptual alignment options for rail improvements would remain within or along the existing transportation corridor, which substantially minimizes the potential for adverse impacts to visual resources. At-grade track improvements would have minimal to no impacts on public views to and along the ocean and shoreline, or to scenic inland areas for both traveler and adjoining views. While at-grade track improvements have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations, the increase in improvement area would be minor, incremental and consistent with the existing facility and the surrounding environment. Additionally, tunnel alignment options that may replace at-grade facilities would adversely impact passenger views to coastal visual resources as portions of the transportation facility would be depressed or placed entirely below grade, thus eliminating coastal views currently available from the at-grade facility. However, tunnel alignments would result in a beneficial impact to overall visual resources in the corridor by placing facilities below

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c. All applications for projects involving new construction on coastal bluff top properties shall be accompanied by a geotechnical report addressing: 1) existing conditions; 2) the suitability of the site for the proposed construction; and 3) the potential of the proposed development to affect bluff stability over a 70-year life span of the project. The report shall also include recommended mitigation measures as they relate to avoidance of risks and preservation of fragile bluff systems. In the event that a submitted report recommends a blufftop setback of a greater distance than otherwise minimally required in this Land Use Plan, the greater distance shall be provided. At the discretion of the Planning Director, the applicant may be required to provide funding for an independent analysis of the project site; the project proposal; and/or any report or information submitted with an application for a project along the top of a coastal bluff. d. In order to protect coastal bluffs from erosion and degradation, all drainage from the impervious surfaces of the site shall be collected and appropriately discharged in a manner which will prevent drainage and/or erosion related damage to the coastal bluff or any other properties or improvements. Drainage facilities shall be designed and constructed as necessary to convey all drainage away from any coastal bluff face and, where available, into an existing developed storm drain systems which can be shown to have sufficient capacity to handle all anticipated drainage flows associated with the proposed project. Where an existing storm drain system is not available, drainage shall be conveyed to a clearly defined, legal natural drainage course which can be shown to have adequate capacity to handle all required drainage flows without adverse impact. All designs and plans for drainage improvements shall be prepared by a licensed civil engineer and shall be subject to the review and approval of the City Engineer. e. Native and other drought-tolerant plant species shall be utilized in all new blufftop construction projects so as to minimize irrigation requirements and to reduce potential slide hazards due to over watering of the bluffs. The construction of irrigation systems shall be prohibited within 40 feet of the edge of the coastal bluff top. In review of new construction projects, the removal of existing irrigation systems within the 40-foot setback shall be required as a condition of development. f. Areas to be retained in their natural state pursuant to the Coastal Bluff regulations shall be subject to conditions to ensure the future protection of the designated area(s) from encroachment, disturbance or degradation. Said conditions shall include the recordation of an open space deed restriction or open space easement to assure protection of the designated area and to serve notice to the property owner, subsequent owners or interested parties of the restrictions in effect on such property.	ground, thus eliminating visibility of ROW structures from public viewsheds. In particular, rail improvements include an option for removal of the rail service from the coastal bluffs in Del Mar and portions of Los Peñasquitos Lagoon, which would eliminate the rail facility from these locations, potentially allowing for restoration to the coastal viewshed in these highly scenic areas.
E. FLOOD HAZARDS GOAL III-D Minimize risks to life and property associated with flooding and flood waters.	*N/A – Highway.* *Potentially consistent – Rail.* The proposed rail improvements would involve minor development within the floodplain; however, the improvements

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FLOOD HAZARD REGULATIONS Policy III-11: Enhance public safety within the San Dieguito River Floodway by: a. Prohibiting the construction of permanent structures or the placement of fill on either a temporary or permanent basis within designated floodway (FW) areas. b. Prohibiting uses in the floodway which would constitute an unreasonable, unnecessary, undesirable, or dangerous impediment to the flow of floodwaters, or which would cause a cumulative increase in the water surface elevation of the base flood or more than one foot at any point. c. Requiring proposed development to be located so as to eliminate the need for protective devices such as seawalls, riprap, retaining walls, or other flood control devices. Policy III-12: Ensure that the development of real property which is subject to floodwaters will not obstruct flood flow; will not create a hazard to life, health, safety, or the general welfare; will reduce the need for the construction of flood control facilities that would be required if unregulated development occurs; and will minimize the cost of flood insurance to Del Mar residents. The following Floodplain (FP) Overlay Zone policies shall be applied to all applications for a Floodplain Development Permit. A Floodplain Development Permit shall be required for any new construction or substantial improvement to existing structures within the FP Overlay Zone designated on Figure III-F. This overlay zone incorporates floodplain areas designated on the Federal Insurance Rate Map (FIRM) for the area as prepared by the Federal Emergency Management Agency and updated in 1986. That map is included as Figure III-E. Policy III-13: The preceding floodplain development standards shall not apply to the undeveloped property known as the "railroad triangle" (APNs 299-071-02, 301-010-11; 301-032-5, 10, 11, 12; as shown on Figure III-G) and the floodplain portions of the southern properties in the Lagoon Overlay Zone. Said floodplain properties or areas may only be developed as follows: 1. The development is capable of withstanding periodic flooding, and does not require the construction of flood protective works, including but not limited to, filling, artificial flood channels, revetments or levees. 2. Existing environmentally sensitive habitat areas will not be disturbed. 3. Increased flood flow velocities will not occur. 4. There will be no adverse water quality impacts to adjacent or downstream wetland areas.	would be conducted within the established LOSSAN rail corridor, designed to withstand periodic flooding, as needed, and would implement BMPs to avoid impacts to water quality. Additional, subsequent site-specific project analysis would be conducted and appropriate design measures and mitigation incorporated to ensure no flood hazards.
CHAPTER IV – COASTAL ACCESS	
B. GOALS AND POLICIES GOAL IV-A Provide physical and visual access to coastal recreation areas for all segments of the population without creating a public safety concern, overburdening the City's public improvements, degrading the City's natural resources, or causing substantial adverse impacts to adjacent private properties.	*N/A – Highway.* *Potentially consistent – Rail.* The proposed LOSSAN rail corridor improvements have been planned and designed to improve the corridor's existing transportation network and address existing concerns regarding maintaining access to the coast

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Goal IV-A, Policy IV-1: The Regulations of the Beach Overlay Zone contained within Chapter III of this Land Use Plan shall be implemented for all projects, where applicable. Project applications for development within the Beach Overlay Zone shall be conditioned to assure that access opportunities are maintained during the construction phase of the project. Goal IV-A, Policy IV-3: Lateral and vertical access ways to and along the shoreline shall be located where they can safely accommodate public use, and shall be distributed throughout the City as much as possible to prevent overcrowding or degradation of resources, minimize parking and traffic congestion, and the misuse of coastal resources. Once constructed, accessways shall be maintained by the property owner and/or developer of the property on which such access is located unless such responsibility is assumed by the City or other appropriate public agency. When such maintenance is required of a (private) property owner or developer, the requirement for on-going maintenance shall be included in an agreement which is to be submitted as a condition of development and recorded against the deed for the property. Goal IV-A, Policy IV-14: Priority shall be given to gaining and improving access-ways located in proximity to public parking areas and public transportation routes. The use of these accessways shall be encouraged through the installation of appropriate signage. Said signage shall indicate, where applicable, the existence and location of nearby public parking areas.	and upland recreation areas. The improvements would enhance, wherever feasible, coastal access and recreation opportunities and facilities. As proposed rail improvements are implemented throughout the corridor, coastal access and recreation enhancement opportunities will be available as future project designs may be able to accommodate new or improved pedestrian and bicycle amenities across the rail corridor, where determined safe and feasible, thus providing non-automobile access from inland corridor communities to and from the coast. Furthermore, as the majority of rail and transit station improvements would be located either within the existing ROW, below grade (tunnel options), or within developed areas, TREP/PWP improvements would not be expected to encroach into adjacent recreational lands.
GOAL IV-B Give priority to pedestrian and bicycle traffic as opposed to automobile traffic through application of the following policies and pursue the increased use of alternate transportation modes to regionally significant areas within Del Mar. Examples of "alternate transportation modes" include: bicycle, pedestrian, bus, shuttle service, and railroad. Goal IV-B, Policy IV-15: Retain and maintain existing bikeways including those along Coast Boulevard, Camino del Mar, Jimmy Durante Boulevard and Via de la Valle. Goal IV-B, Policy IV-18: Cooperate with other local, State and Federal agencies in developing a system of pedestrian trails and bicycle paths that would link together coastal recreation areas such as the beaches, Crest Canyon, San Dieguito Lagoon, and Los Penasquitos Lagoon. Goal IV-B, Policy IV-19: The improvement or establishment of alternative transportation modes shall be designed to assure protection of sensitive resources and the retention of the small-town scenic qualities of Del Mar.	*N/A – Highway.* *Potentially consistent – Rail.* The proposed LOSSAN rail corridor improvements would provide a multimodal alternative to single occupancy vehicles for residents and visitors travelling to visitor-serving and recreation uses located within the coastal zone. In addition, the project would enhance pedestrian circulation and bicycle opportunities to the coast via a pedestrian crossing and trail improvements.
GOAL IV-C Preserve existing views and view corridors from public vantage points to the maximum extent possible without	*N/A - Highway.*

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preventing reasonable use of private property. Policy IV-22: Enhance public improvements along appropriate bluff top areas which provide significant scenic vistas when such improvements are not in conflict with bluff preservation policies. Improvements shall include the installation of benches for scenic viewing at the western terminus of 11th, 8th and 4th Streets and along the upper bluff area south of Del Mar Canyon. All bluff top improvements shall be consistent with the goals and policies of Chapter III of this Land Use Plan regarding the preservation of the fragile coastal bluff systems and the minimizing of hazardous conditions. Policy IV-23: Retain the bluff top areas west of the railroad right of way between the southern border of the City and 15th Street in an open space condition to provide panoramic ocean views; to provide lateral access along the coastal bluff top; and to preserve and protect the adjacent fragile and scenic bluffs. Policy IV-24: Preserve views of the Pacific Ocean from Camino del Mar through the application of scenic view easements and related view preservation restrictions for development proposals located along the west side of this roadway within the Central Commercial, Professional Commercial or Visitor Commercial designations shall not exceed a height of 14 feet above the adjacent curb level of Camino del Mar. Policy IV-25: Preserve views of the Los Penasquitos Lagoon and Pacific Ocean from Carmel Valley Road through the application of scenic view easements and related view preservation restrictions for any development proposals located along the south side of the roadway within scenic view corridors. Policy IV-26: Retain and enhance the views of San Dieguito Lagoon along Jimmy Durante Boulevard and San Dieguito Drive through the application of scenic view easements and related view preservation restrictions for any development proposals located along the sides of such roadways within scenic view corridors. Policy IV-28: In order to protect the scenic resources of the City, no roof top signs shall be allowed. Freestanding monument signs shall be allowed but shall be limited to a maximum height of three feet in cases where front-yard buildings setbacks of less than 20 feet are provided and 8 feet in cases where front-yard building setbacks of 20 feet or greater are provided. Freestanding pole or roof signs are not permitted. In addition, all new development or redevelopment shall provide a minimum of 15% landscape coverage for commercial sites and 30% landscape coverage for residential sites.	*Potentially consistent – Rail.* The proposed rail facility track improvements would be primarily contained within the existing ROW or in deep tunnels and, thus, would minimize the need for excessive grading and landform modification that could otherwise impact the Del Mar coastal bluffs. See also discussions under B. Shoreline Hazards and C. Coastal Bluffs, above. Furthermore, at-grade track improvements would have minimal to no impacts on public views to and along the ocean and shoreline, or to scenic inland areas for both traveler and adjoining views. While at-grade track improvements have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations, the increase in improvement area would be minor, incremental and consistent with the existing facility and the surrounding environment. Additionally, although tunnel alignment options replacing at-grade facilities could result in an adverse impact by eliminating passenger views to coastal visual resources views currently available from the at-grade facility, it would result in a beneficial impact to overall visual resources in the corridor by placing facilities below ground, thus eliminating visibility of ROW structures from public viewsheds. In particular, rail improvements include an option for removal of the rail service from the coastal bluffs in Del Mar and portions of Los Peñasquitos Lagoon, which would eliminate the rail facility from these locations, potentially allowing for restoration to the coastal viewshed in these highly scenic areas.
GOAL IV-D Maximize the opportunity for access to beach areas by minimizing competition for public on-street parking spaces.	*N/A – Highway.* *Potentially consistent - Rail.* The proposed

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	LOSSAN rail corridor improvements would be designed to avoid adverse affects to beach parking. Further, improvements would facilitate shoreline access by providing bicycle and pedestrian facilities and routes that connect with public transit centers, link neighborhoods and connect inland coastal areas. The proposed improvements also include expanded parking areas at 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 Racetrack and Fairgrounds.
CHAPTER V – RECREATIONAL OPPORTUNITIES	
B. GOALS AND OBJECTIVES GOAL V-A It is the goal of the City to provide a system of public parks and recreational facilities that will support the year-round needs of both residents and visitors to the area. The parks and recreation system shall encompass a full range of activities for people of all ages, physical conditions, and socio-economic situations. The Park and Recreation System shall closely interrelate with other recreation facilities and areas within the region and provide for outdoor recreational opportunities that are compatible with the unique character of the City and the sensitive habitat it contains. Policy V-1: The City shall implement a comprehensive program to preserve existing open space and recreation lands and where feasible acquire additional lands to meet the long-range needs of residents and visitors. This program shall be developed using the following criteria: a. Small "pocket parks", also known as "mini-parks", should be utilized in the largely developed areas of the City where land for larger parks is difficult to obtain. b. Sites should be acquired and developed to provide for special recreation needs including passive and active recreation areas, nature areas, aquatic areas, athletic facilities, and pedestrian, equestrian, and bicycle trails. c. Park and open space systems should be protected from adjacent land uses that may infringe on scenic views. d. Park planning should be integrated with planning for open space, conservation, hiking, bicycle, and equestrian	*N/A – Highway.* *Potentially consistent - Rail.* The proposed LOSSAN rail corridor improvements would facilitate increased and efficient transit, providing for an alternative to private vehicle use. The project also includes a number of recreational trail and bicycle improvements intended to support public access to recreation areas, beach and visitor-serving support facilities, and low cost recreation. The project does not include improvements that would result in closure or conversion of public accessways. Finally, adding a new platform in Del Mar would provide new access opportunities to the beach, San Dieguito River Park, and Del Mar Racetrack and Fairgrounds.

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trails, regional parks, and scenic highways. Whenever practical, parks should be linked together by a system of trails and/or open space. Policy V-2: The City shall cooperate with other jurisdictions in the acquisition and preservation of open space and recreation lands through the following: a. Encourage the expansion of nearby State and County parks, including continued cooperation with other local, State, and Federal agencies to implement the San Dieguito Lagoon Resource Enhancement Program and to improve the lagoon and the San Dieguito River Valley for use as a wildlife preserve. b. Cooperate in the planning and implementation of the San Dieguito River Valley Regional Open Space Park and ensure that said park plan or that for any other park along the San Dieguito River: i. Involves only the minimal amount of disturbance and impact to the natural terrain and ecosystem of the area necessary to provide access to and along the San Dieguito River Valley; ii. Controls such access to minimize impacts on wildlife and sensitive habitat; and iii. Provides fencing or vegetated berms between areas of human activity and sensitive habitat. iv. Enlarges the San Dieguito Lagoon ecosystem to its former size stretching form the ocean towards El Camino Real on the east. v. Restores a total, well-functioning ecological unit which includes: tidal flushing through a continuous or nearly continuous rivermouth opening, open waters, wetlands, uplands and bluffs. vi. Establishes a link to Regional San Dieguito River Valley ecosystem and the ocean. vii. Ensures a good quality freshwater flow from upstream in the San Dieguito River Channel. viii. Protects, preserves and enhances the open alley by retaining open space and views of scenic topography and the ocean. ix. Protects, preserves and enhances the variety of natural features such as the Floodplain, the open waters of the lagoon and river, wetlands, marshlands, mudflats and uplands with their grassland, coastal sage and Torrey Pine trees. x. Protect scenic viewsheds by retaining the open character of the uplands, low hills and sandstone bluffs. Policy V-4: Bicycle and pedestrian access to recreation facilities, as opposed to automobile use, shall be encouraged, and priority shall be given to greenery and open space, as opposed to structures and paved areas. The use of private motorized vehicles on the public beach and parklands shall be prohibited. Policy V-5: The City shall provide or shall coordinate the provision of public facilities in recreation areas, including: c. Adequate public access improvements to provide access opportunities to and along Del Mar beach areas; Policy V-7: In order to promote the acquisition and development of parks and recreation lands commensurate with the added public demands for park facilities, the dedication of land for parks, the payment of "in lieu" park fees, or a combination thereof, shall continue to be required as conditions of subdivision applications, as set forth by City Council	

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resolution. d. The City of Del Mar shall attempt to acquire property, as appropriate, to augment the San Dieguito Lagoon Resource Enhancement Program project and the San Dieguito River Valley Regional Open Space Park.	
CHAPTER VI – SENSITIVE LANDS	
B. STEEP SLOPE PRESERVATION – GOALS AND POLICIES GOAL VI-A Preserve Del Mar's steep sloping hillsides and downstream resources. Policy VI-1: Preserve and protect sensitive slopes and associated bluff and canyon areas and, their downstream resources through the application of the following Bluff, Slope and Canyon Overlay Zone Regulations. <u>BLUFF, SLOPE AND CANYON OVERLAY ZONE REGULATIONS</u> A. <u>Purpose</u>. The BSC Overlay Zone is designed to protect the health/safety, and general welfare and to control the development of properties within the designated zone in order to preserve the scenic sandstone bluffs and related canyons and steep slopes which characterize the area within he zone. The overlay zone is also intended to protect downstream resources from the adverse impacts of erosion and sedimentation. These unique landforms provide visual relief and diversity within the City, and they define and separate neighborhoods and communities physically, thereby enhancing the overall quality of Del Mar's coastal environment. The Bluff, Slope and Canyon (BSC) Overlay Zone is further designed to carry out the goals, objectives, and policies of the Community Plan, including, but not limited to, the applicable element of the Community Plan, the Bluff, Slope and Canyon Precise Plan.	*N/A – Highway.* *Rail - Potentially consistent.* Although the proposed rail facility track improvements would be primarily contained within the existing ROW and, thus, would minimize the need for excessive grading and landform modification that could otherwise impact the Del Mar coastal bluffs, project grading could remove or substantially alter natural landforms, landscaping, trees, and topography (berms, hills, etc.), decreasing the visual openness and semi-rural character of the corridor. In addition, shoreline protection structures associated with the proposed improvements at the Del Mar bluffs would be minor and would consist only of protection measures necessary to support existing and/or replacement facility crossings, where designed, to eliminate or minimize impacts to shoreline processes.
D. WETLAND PRESERVATION – GOALS AND POLICIES GOAL VI-B Preserve, protect and, where feasible, enhance the wetland areas of Del Mar. Policy VI-3: Ensure the protection of the wetlands of the Los Penasquitos Lagoon and San Dieguito Lagoon and their sensitive upland habitat by requiring that all development activities taking place in lagoon and uplands areas, designated on the Lagoon Overlay Zone Map (Figure IV-B), conform to the wetland preservation regulations of this chapter. In addition, the City shall implement the Bluff, Slope and Canyon Overlay Zone regulations of this Land Use Plan to protect sensitive wetland habitat from the impacts of upland development which lies outside of the Lagoon Overlay Zone but within the watershed of San Dieguito and Los Penasquitos Lagoons. <u>WETLAND PRESERVATION REGULATONS</u>	*N/A – Highway.* *Potentially inconsistent – Rail.* The proposed LOSSAN rail corridor improvements would result in minor development encroachment potentially resulting in direct impacts to coastal wetland areas within the City. The existing location of the rail facility requires that the proposed improvements occur in areas containing wetlands; therefore the project may not meet the standard minimum 100-foot wetland buffer, and could result in unpermitted uses in required buffers.

LCP ELEMENT	PRELIMINARY CONSISTENCY REVIEW
1. Definitions. For purposes of this chapter, "wetlands" and "wetland buffers" shall be defined as follows: "Wetlands": All lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface of where the land is periodically covered by water. All lands having one or more of the following attributes are "wetlands": a. Lands which, at least periodically, support predominantly hydrophytes (plants whose habitat is water or very wet places); b. Lands in which the substratum is predominantly undrained hydric soil; or c. Lands in which the substratum is non-soil and is saturated with water or covered by water at some time during each year. [This definition of wetlands is consistent with the wetland definition criteria established by the United States Fish and Wildlife Service and the California Department of Fish and Game] "Wetland buffer": Lands which provide a buffer between human development/activity and wetland areas and which serve to protect the environmental and functional habitat values of the wetland, or lands which are integrally important in supporting the full range of the wetland and adjacent upland biological community. 2. Permitted Uses in Wetlands. Permitted uses in wetland areas shall be limited to the following uses and activities, provided that the implementation of such uses or activities does not involve grading, filling, construction or placement of structures within the boundaries of wetlands areas as determined pursuant to the policies of this chapter: a. Aquaculture, provided that it is carried out in such a manner so as to avoid any adverse impacts to the water quality or the biological productivity of the wetlands. b. Scientific research, educational or recreational uses, provided that they do not involve adverse impacts to the natural ecosystem. c. Wetland restoration projects where the primary function is restoration of wetland habitat. 3. Permitted Uses in Wetland Buffer Areas. Permitted uses in wetland buffer areas shall be limited to: a. Passive recreational access paths and viewpoints within the upland half of the buffer, only when designed to assure no adverse impacts to adjacent wetland areas. An exception to allow access paths or viewpoints within the lower half of the buffer may be permitted where there is an elevation difference between the buffer and wetland resources of at least ten feet, or where an existing accessway/viewpoint present will be formalized. Any such permitted new access trail or viewpoint shall be set back at least ten feet from the edge of the bluff/slope. No armoring or reinforcing to either construct or maintain such a trail or viewpoint will be permitted. b. The placement of improvements necessary to provide protection, preservation or enhancement of adjacent wetland areas. Such improvements shall be located within the upland half of the buffer only, and may include, but are not limited to fencing, creation of landscape berms and placement of signage related to scientific, educational or recreational uses. c. All uses permitted in wetland areas.	The proposed rail facility project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The project would include BMPs to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/ minimized through the use of Construction site BMPs while the long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor.

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4. Application Submittals. Applications for development of property which includes, or lies in proximity to wetland areas as designated on the Lagoon Overlay Map (Figure VI-B) shall include topographic and vegetative maps as necessary to delineate the wetland boundary. The determination of the boundary of wetland areas shall be included as an overlay to a required topographic map and shall be prepared by a qualified professional(s) in the fields of biology and hydrology. The California Department of Fish and Game and the United States Fish and Wildlife Service shall be consulted in such determinations. 5. Provision of Wetland Buffers. a. To protect wetland areas, All new construction projects which are located on property which includes or lies in proximity to wetland habitat, as shown in Figure VI-B, shall include the provision of a continuous wetland buffer. The buffer shall be 100-feet in width with permitted uses in the wetland buffer limited to those cited in Wetland Regulations #3 of this Chapter. The buff shall be measured landward from the boundary of wetlands as delineated pursuant to the requirements of this chapter. b. A wetland buffer of less than 100 feet in width shall be allowed only when, due to physical constraints such as the size and dimensions of the property, such buffer of a lesser width will protect the resources of the adjacent wetlands, based on site-specific factors. Such factors shall include, but not be limited to, the type and size of the development proposed; mitigation measures provided (such as planting of vegetation or construction of fencing); elevation differentials between the proposed development and wetland boundaries; or other similar factors which will serve to contribute to the purposes of a wetland buffer area. Proposals for mitigation measures for wetland buffers less than 100 feet in width shall be referred to representatives of the California Department of Fish and Game for a recommendation. In no event shall the wetland buffer be less than 50 feet in width. The provisions of a wetland buffer of less than 100-feet in width which, pursuant to this policy, has been authorized for one aspect of a development proposal, shall not be construed as an authorization to provide a buffer of less than 100-feet in width for other aspects of such proposal which have not been specifically enumerated in the required findings set forth herein. 6. Retained Open Space/Conditions of Development. Areas to be retained in or restored to their natural state pursuant to the application of these wetland preservation regulations shall be subject to conditions to ensure the future protection of the designated area(s) from encroachment, disturbance or degradation. Said conditions shall include the recordation of an open space deed restriction, conservation easement or open space easement on wetland buffer areas and an irrevocable offer to dedicate open space easement to ensure protection of the designated wetland area and to serve notice to the property owner, subsequent owners or interested parties of the restrictions in effect on such property. The transfer of fee title of wetland areas to an appropriate agency shall also serve to satisfy the requirements of this section. The City shall encourage and coordinate such transfers of title to the appropriate public agency. 7. Siting and Construction Practices. All buildings or other improvements proposed to be placed or erected, and all	

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grading activities proposed to be undertaken adjacent to wetland or wetland buffer areas shall be located so as not to contribute to increased sediment loading of the wetland or wetland buffer, cause disturbance to its habitat values, or otherwise impair the functional capacity of the wetland or wetland buffer. 8. Drainage and Erosion Control. All development activities on project sites within the Lagoon Overlay Zone shall be subject to conditions for the provision of measures to minimize and control runoff and the associated erosion and sedimentation of downstream areas. Runoff from developed sites shall be either directed towards existing storm drain systems or retained on-site in settling ponds or other drainage/erosion control measures. Where, due to factors of topography, neither direction of runoff into storm drain systems nor retention on site is possible, runoff shall be appropriately discharged at non-erosive flows and velocities through the use of energy dissipation devices. All development within the Lagoon Overlay Zone shall comply with the following erosion control measures: a. The applicant shall provide a grading plan prepared by a registered civil engineer that incorporates runoff and erosion control procedures to be utilized during all phases of project development. b. The grading plan shall be designed to assure that there will be no increase in the peak runoff rate from the fully developed site over the greatest discharge that would occur from the existing undeveloped site as a result of the intensity of rainfall expected during the six-hour, ten-year design storm. c. Runoff control shall be accomplished by establishing on-site or at suitable locations nearby, catchment basins, detention basins, and siltation traps along with energy dissipating measures at the terminus of storm drains, or other similar measures of equal or greater effectiveness. d. Sediment basins (debris basins, desilting basins, or silt traps) shall be installed in conjunction with the initial grading operations and maintained through the development process as necessary to remove sediment from runoff waters draining from the land undergoing development. Areas disturbed but not completed prior to November 15, including graded pads and stockpiles, shall be suitably prepared to prevent excessive soil loss during the rainy season. e. The use of vegetation as a means to stabilize soils and control site erosion shall be accomplished pursuant to plans and specifications prepared by a licensed landscape architect or other qualified professional. f. All graded slopes shall be stabilized prior to November 15, by the planting of vegetation. Vegetative erosion control may include but is not limited to, seeding, mulching, fertilization, and irrigation within sufficient time prior to November 15 to provide landscape coverage that is adequate to achieve the provisions of this policy. g. For projects involving a total of more than 25 cubit yards of cut and/or fill grading operations, no grading shall occur from November 15 to March 31. h. Temporary erosion control measures shall include the use of berms, interceptor ditches, sandbagging, hay bales, filtered inlets, debris basins, silt traps, or other similar means of equal or greater effectiveness. 9. Where the provisions of erosion and/or drainage control measures is required pursuant to the policies of this section, the responsibility for maintenance for such measures shall rest with the applicant unless such responsibility is assumed by another agency or party found acceptable by the Planning Director. The responsibility for maintenance and a detailed maintenance program shall be included in an agreement(s) recorded against the deed for the property. The arrangements shall provide for the on-going repair and maintenance of approved control measures to assure continued	

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effective erosion/drainage control. The agreements, and any associated cash deposits, bonding or letters of credit deemed necessary to assure on-going maintenance shall be secured prior to the release of permits. 10. Runoff from the projects within the Lagoon Overlay Zone shall be controlled and directed to ensure that neither toxic materials nor excess nutrients flow into lagoon areas. 11. New or redevelopment projects within the Lagoon Overlay Zone shall include the retention of the maximum amount of native vegetation on the site. Revegetation of sites within the Lagoon Overlay Zone shall include the use of non-invasive, drought tolerant species native to the San Diego coastal region and which are compatible with adjacent wetland habitat species. Landscape plans including their associated berms, planters and fences shall also be designed to minimize the disruption of view corridors from public roadways and parks.	
Policy VI-4: To protect the biological and visual resources of wetland areas, the City shall encourage the undergrounding of all new utility lines and new utility line extensions for projects within the Lagoon Overlay Zone when such undergrounding would not be detrimental to the wetlands or to the sensitive resources located in the upland areas adjacent to such wetlands.	*N/A – Highway.* *Potentially consistent – Rail.* The proposed LOSSAN rail corridor improvements would be primarily contained within the existing ROW or deep tunnels with impacts to wetland areas minimized to the extent feasible through site design. Furthermore, any utilities proposed as part of the project would be placed underground, where feasible.
Policy VI-5: The following policies shall apply only to those properties located immediately adjacent to and west of the AT&SF Railway right of way between 28th Street and 21st Streets and shown on Figure VI-C. a. All new construction projects shall maintain the minimum interior side-yard setbacks specified in the Del Mar Municipal Code for the eastern sides of the properties, those closest to the AT&SF Railway right of way. b. Landscape plans shall be provided in all new construction projects. Said plans shall include the provision of a landscape buffer between the structures located on the site and the eastern property line(s). The plant species indicated on such plans shall be reviewed for their compatibility with the wetland habitat located on the property to the east, the AT&SF Railway right of way. c. Drainage plans shall be provided in all new construction projects. Said plans shall be reviewed to assure that runoff and drainage from the site is appropriately collected and discharged to avoid erosion and sedimentation and to ensure that neither toxic materials nor excess nutrients flow into adjacent wetlands.	*N/A – Highway/Rail.*
Policy VI-6: The viewsheds of the San Dieguito and Los Penasquitos Lagoons shall be preserved and protected through the application of the following criteria into the design of new and redevelopment projects within the viewshed areas of the San Dieguito and Los Penasquitos Lagoons, respectively. a. Compatibility of design with the existing and desired character of the surrounding area;	*N/A – Highway.* *Potentially consistent – Rail.* The majority of conceptual alignment options for rail improvements

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b. Recognition of views, climate and the nature of outside activities in the design of exterior spaces; c. Design of buildings to be subservient to the natural terrain; and d. Consideration of views from the lagoon and the surrounding roadways in the landscape and structure design. The review of projects within the specified viewsheds shall be conditioned to ensure continued conformity with the criteria listed herein. Such conditions shall include but are not limited to recorded view corridor easements or restrictions.	would remain within or along the existing transportation corridor, which substantially minimizes the potential for adverse impacts to visual resources resulting from implementing the proposed track improvements. At-grade track improvements would have minimal to no impacts on public views to and along the ocean and shoreline, or to scenic inland areas for both traveler and adjoining views. While at-grade track improvements have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations, the increase in improvement area would be minor, incremental and consistent with the existing facility and the surrounding environment. The proposed rail improvement options include ling through portions of the corridor that could allow for restoring open space areas presently displaced by portions of the existing facility, with an option of removing the rail service from the coastal bluffs in Del Mar and Los Peñasquitos Lagoon, which would reduce overall visibility of the rail facility and result in a beneficial impact to these coastal viewsheds. Removing the existing rail facility from Del Mar bluffs would further provide an opportunity to remove and restore the shoreline area currently occupied by shoreline protection devices, which were permitted to ensure stability of the bluff and support continued operation of the rail facility. Additional opportunities for coastal visual resources could include replacement of existing rail bridge structures which, due to their age, are relatively dense in form and mass and presently block views

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	to the ocean and/or inland areas. TREP improvements that would replace and update bridge structures could open the viewshed in some of the lagoon areas with new bridge designs that minimize support structures and, thus, reduce the visual mass of the structure and provide a more visually permeable design.
Policy VI-7: The City shall continue cooperation with other local, State, and Federal agencies in the implementation of the San Dieguito Lagoon Enhancement Program and the Conceptual Plan for the Expanded Enhancement Program described in Appendices B and C, respectively.	*Potentially consistent – Highway.* Although the proposed I-5 improvements would not be located within the City of Del Mar's LCP area, the TREP/PWP Resource Enhancement Program would facilitate implementation of lagoon enhancements throughout the region. *Potentially consistent – Rail.* The proposed LOSSAN rail corridor improvements include a Resource Enhancement Program component that provides for advanced mitigation opportunities that will allow for wetland and upland habitat creation or significant enhancement of degraded habitat prior to project implementation. This results in eliminating even a temporary loss in the amount of habitat in the corridor. In addition, the program provides for a no net loss of habitat standard to ensure that the variety and range of significant coastal habitats in the corridor is not diminished due to the proposed rail and highway improvements.

3. City of Encinitas

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LAND USE	
POLICY 1.6: Provide freeway-oriented commercial areas only when a demonstrated need exists, for the convenience of the traveler, and locate these activities at or near freeway interchanges with easy on-off access. (Coastal Act/30250/Visitor-Serving)	*Potentially consistent - Highway.* While not considered a "commercial" use, the I-5 NCC project includes construction of a park-and-ride facility at the I-5 and Manchester Avenue interchange, as well as a variety of pedestrian and trail improvements/ overcrossings/ connections at other interchanges to serve multi-modal travelers in the corridor. *N/A - Rail.* Rail improvements are not located at or near freeway interchanges.
POLICY 1.10: Encourage the reasonable regulation of signs to preserve the basic character of the communities and to avoid adverse effect on property values. New pole and roof signage shall be prohibited. Freestanding monument signs shall be permitted, but shall be limited to a maximum height of eight feet. A variance from this height limitation may be granted by the City based on extreme topographic constraints and a demonstration that all other reasonable alternatives have been considered to provide site/business identification. Detailed sign regulations and limitations shall be as further specified in the City's zoning regulations. (Coastal Act/30251/Visual Protection) *Policy 1.10 amended 5/11/95 (Reso. 95-32)*	*Potentially consistent - Highway.* New facility signage would generally include changeable message signs and congestion pricing signage. Any new signage along the I-5 NCC project area would be consistent with standard Caltrans design which is generally unobtrusive to the surrounding environment. *Potentially consistent - Rail.* It is unknown whether signs greater than 8 feet tall are proposed as part of rail double-tracking, or for new station parking, pedestrian crossings and/or grade separations, which may require signage for safety purposes.
POLICY 2.7: Implement mechanisms to ensure the preservation of significant environmental areas of the City. These mechanisms might include establishing development standards, encouraging developers to maximize open space, transfers of development rights (TDR's), land banking, purchase, etc. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* See additional policy analysis under Resource Management section below. The proposed project is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor.
POLICY 2.8: Development shall not be permitted where it will result in significant degradation of ground, surface, or ocean water quality, or where it will result in significant increased risk of sewage overflows, spills, or similar accidents. (Coastal Act/30231)	*Potentially consistent – Highway/Rail.* The proposed project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project through implementation of Best Management Practices (BMPs). In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. Benefits to water quality from

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	the proposed rail improvements could result also from the reduction in vehicle miles traveled on area highways that may occur with increased and improved rail service as fewer roadway pollutants would be present in the surface run-off from the roadways.
POLICY 6.5: The design of future development shall consider the constraints and opportunities that are provided by adjacent existing development. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The transportation improvements have been designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility. Use of existing right-of-ways would further limit proposed footprints. As such, the project is designed to minimize impacts to adjacent land uses, and to take advantage of new opportunities to enhance land uses by creating and improving facilities for pedestrian and bicycle use and habitat restoration.
Goal 8: Environmentally and topographically sensitive and constrained areas within the City shall be preserved to the greatest extent possible to minimize the risks associated with development in these areas. (Coastal Act/30240/30253) *Goal 8 amended 5/11/95 (Reso. 95-32)*	*Potentially consistent – Highway/Rail.* The transportation improvements has been designed so as to affect the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility, and to avoid, to the maximum extent feasible, sensitive and constrained areas in the City. See additional policy analysis under Resource Management section below.
POLICY 8.1: Require that any improvement constructed in an area with a slope of more than 25% and other areas where soil stability is at issue to submit soils and geotechnical studies to the City for review and approval. These studies shall document that the proposed development will not adversely affect hillside or soil stability and that no future protective measures will be required. (Coastal Act/30253) *Policy 8.1 amended 5/11/95 (Reso. 95-32)*	*Potentially consistent – Highway.* Highway improvements involve construction on slopes exceeding 25% in some areas in the corridor; soils and geotechnical studies documenting no adverse affect to hillside or soil stability have been incorporated into the I-5 draft EIR/EIS. *Potentially consistent - Rail.* It is unknown if rail improvements would be constructed in areas with a slope exceeding than 25%; site-specific soils and geotechnical studies would be completed and appropriate protection measures incorporated prior to development.
POLICY 8.2: Development within coastal and flood plain areas identified in the Land Use and Resource Management Elements must be limited, designed to minimize hazards associated with development in these areas, and to preserve area resources. Within the floodway, channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to necessary water supply projects, flood control projects where no other method for protecting	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP does not include channelization of a floodway. The project involves replacement of the San Elijo and Batiquitos Lagoon bridge crossings within the floodways of these lagoons; however, the project would improve existing public roadway and

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existing public or private structures is feasible and where such protection is necessary for public safety or to protect existing development, and other development where the primary function is the improvement of fish and wildlife habitats. No development shall occur in the 100-year Floodplain that is not consistent and compatible with the associated flood hazard. Only uses which are safe and compatible with periodic flooding and inundation shall be considered, such as stables, plant nurseries, a minimum intrusion of open parking, some forms of agriculture, and open space preservation, as appropriate under zoning, and subject to applicable environmental review and consistency with other policies of this Plan. No grading or fill activity other than the minimum necessary to accommodate those uses found safe and compatible shall be allowed. Such grading shall not significantly redirect or impede flood flows or require floodway modifications. Exceptions from these limitations may be made to allow the following: a. Minimum private development (defined as one dwelling unit per legal parcel under residential zoning, and an equivalent extent of development under non-residential zoning) only upon a finding that strict application thereof would preclude a minimum use of the property. b. Development of circulation element roads, other necessary public facilities, flood control projects where no feasible method for protecting existing public or private structures exists and where such protection is necessary for public safety or to protect existing development, and other development which has as its objective the improvement of fish and wildlife habitat. c. Limited reconfiguration of the flood plain in previously degraded areas provided it is determined by the City that the reconfiguration of the flood plain is incidental to the improvement of an overall storm water system and that the reconfigured storm water system is substantially based on natural channels with vegetation to accommodate storm water management. This is applicable to the El Camino Real creek corridor draining into Encinitas Creek. These exceptions shall be allowed only to the extent that no other feasible alternatives exist and minimum disruption to the natural floodplain environment is made. The City shall not approve subdivisions or boundary line adjustments which would allow increased impacts for development in 100-year floodplains. For specific policy provisions regarding wetlands which may be associated with floodplains, refer to Resource Management Element Policy 10.6. (Coastal Act/30253) *Policy 8.2 amended 1/30/91, 9/21/94 (Reso. 94-29) and 5/11/95 (Reso. 95-32)*	rail facilities providing for potential coastal resource enhancements through design and implementation of reduced footprints within the lagoons, which is consistent with this policy.
POLICY 8.5: The Special Study Overlay designation shall be applied to lands which, due to their sensitive nature, should only be developed with consideration of specific constraints and features related to drainage courses, bluffs, slopes, geology and soils, biotic habitat, viewsheds and vistas, and cultural resources. Development within the overlay area shall be reviewed and approved in accordance with criteria and standards which protect coastal and inland resources. (Coastal Act/30240/30253)	*Potentially consistent, in part – Highway/Rail.* See preliminary analysis in respective policy sections.
POLICY 8.6: Significant natural features shall be preserved and incorporated into all development. Such features may include bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views. (Coastal Act/30240/30250/30251)	*Potentially inconsistent - Highway/Rail.* Transportation improvements would result in minor encroachments into natural areas, and would involve removal of trees and grading of

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	landforms. The project has been designed to retain significant natural features where feasible, and the proposed Resources Enhancement Program is designed to minimize such impacts through enhancing open space and associated natural features and visual resources where feasible. However, transportation improvements would result in removal of existing vegetation and grading of existing landforms, and construction of new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). Rail improvements would generally occur in the existing right-of-way, although bridge replacements, new grade separations and new parking at Encinitas Station would likely encroach into natural areas or potentially result in new fill or grading.
POLICY 8.7: Non-developable or constrained areas should be evaluated for possible use as open space or recreational use. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* Increased mobility on the LOSSAN rail and I-5 highway corridors would increase coastal and recreational accessibility, and proposed community enhancement projects would further improve coastal access and recreational facilities and improve the urban design character of the NCC. The transportation improvements include several pedestrian overcrossings throughout the City as well as related pedestrian and trail connections/enhancements.
POLICY 8.9: The City will adopt land use categories for environmentally sensitive areas for the purposes of the Local Coastal Plan and will implement these categories by such ordinance and policy measures as may be appropriate. (Coastal Act/30250)	*N/A – Highway/Rail.* The proposed transportation improvements would not change or affect land use categories identified within the LCP.
POLICY 8.10: Ecological Resource/Open Space/Parks is a category intended to be applied to both active and passive parklands; lagoons; wetland habitat areas and their adjacent buffers; and other areas of significant environmental quality or public resource value. Lands in the Ecological Resource/Open Space/Parks category, other than public parks, and similar areas for active recreation, will be limited to uses and activities related to habitat enhancement; educational and scientific nature study; passive recreation which will have no significant adverse impact on habitat values; and, aquaculture having no significant adverse effect or negative visual impact on natural processes or scenic quality. All areas possessing wetland resource values, including coastal salt marsh and freshwater marsh habitat types, shall be protected by appropriate buffers. Buffer zones sufficient to protect wetlands shall generally be minimum 100 feet in width, and buffer zones to protect riparian areas shall generally be minimum 50 feet in width, unless a use or development proposal demonstrates that a smaller buffer will protect the resources of the wetland/riparian area based on site-specific information, including but not limited to, the type and size of the development and/or proposed mitigation (such as planting of vegetation) which will also achieve the purposes of the buffer. The buffer should be measured landward from the wetland or	*Potentially inconsistent - Highway/Rail.* The transportation improvements would result in minor development encroachment into ecological, open space, and park lands, which is inconsistent with the permitted uses identified in Policy 8.10. The existing location of the transportation facilities requires that the proposed improvements occur in areas containing wetlands and riparian habitat; therefore the project would not provide the standard minimum 100 foot wetland buffer and 50 foot riparian buffer recommended, and would also result in unpermitted uses in required buffers. As discussed under Policy 2.8 above, the proposed project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the

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riparian area. Maps and supplemental information submitted as part of the application should be used to specifically determine these boundaries. The California Department of Fish and Game and the U.S. Fish and Wildlife Service shall be consulted in such buffer determinations and their comments shall be accorded great weight. Development permitted in wetland and riparian buffer areas shall be limited to access paths, passive recreational uses, fences and similar improvements necessary to protect the wetland or riparian resource, and shall be restricted to the upper or landward half of the buffer. Wetland/riparian areas and their associated buffers shall be permanently protected from development through the application of an open space easement or other suitable instrument. Developments shall be located and designed so as not to contribute to increased sediment loading of the wetland/riparian area, cause disturbances to its fish and wildlife values, or otherwise impair the functional capacity of the resource. Exceptions from this policy for intrusion of development into wetland or riparian areas and their associated buffers shall only be considered as specified in Resource Management Policy 10.6. (Coastal Act/30240)	corridor. The project would include BMPs to address potential water quality impacts during the construction and operational phases of the project, which would ensure the project is designed so as not to contribute to increased sediment loading of adjacent wetland/riparian areas.
GOAL 9: Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semirural living within the I-5 View Corridor and within other view corridors, scenic highways and vista/view sheds as identified in the Resource Management Element. (Coastal Act/30240/30251)	*Potentially inconsistent - Highway/Rail.* Transportation improvements would result in encroachments into natural areas, open space, and would involve construction of retaining/soundwalls, highway infrastructure and railway grade separations potentially affecting the visual character of the NCC corridor. The project has been designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility and as such, would not significantly encroach into and adversely affect existing open spaces, bluffs or lagoon areas. Visual resource enhancement opportunities provided by the TREP/PWP would include replacement and updates to bridge structures within the San Elijo and Batiquitos Lagoons, which could open the viewshed in some areas with new bridge designs that minimize support structures and, thus, reduce the visual mass of the structure and provide a more visually permeable design.
POLICY 9.1: Encourage and preserve low-density residential zoning within I-5 Corridor while preserving the best natural features and avoiding the creation of a totally urbanized landscape and maintain I-5 Interchange areas to conform to the specifications of this overall goal. The City will develop an I-5 view corridor plan to implement this policy. (Coastal Act/30240/30251)	*Potentially consistent - Highway.* As detailed in Goal 9, above, the I-5 NCC project includes various improvements that could potentially change existing visual resources. However, the project would have no affect on residential zoning within the I-5 Corridor. Further, to minimize visual impacts, the project would implement TREP/PWP visual enhancement opportunities such as undergrounding existing utilities or creation of new open space,

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	where feasible. *N/A - Rail*. Rail improvements are not located within the I-5 corridor.
POLICY 9.2: Encourage retention of buffer zones such as natural vegetation or earth barriers, bluffs, and canyons to protect adjacent areas of freeway corridor from pollutants of noise, exhaust, and light. (Coastal Act/30240/30251)	*Potentially consistent - Highway.* The project is designed to maintain natural buffers between the corridor and adjacent land uses as much as possible; however, where necessary, the I-5 NCC project includes removal of existing vegetation and grading of adjacent landforms and construction of new retaining walls and soundwalls in parts of the corridor to protect adjacent areas from pollutants, noise and exhaust. *N/A - Rail.* Rail improvements are not located within the I-5 corridor.
POLICY 9.3: Prohibit and eliminate billboards and obtrusive advertising media along freeway corridors, Highway 101/First Street and other scenic corridors and routes as specified in the Resource Management Element, Figure 3. (Coastal Act/30251)	*Potentially consistent – Rail/Highway.* Although the transportation improvements include new freeway signage along I-5, signs would meet Caltrans design standards and are generally unobtrusive. Further, no billboards or advertising media is proposed along the I-5 or LOSSAN rail corridors.
POLICY 9.4: Encourage all landscaping along major arterials to enhance, harmonize with, and not detract from the natural features of the surrounding area. (Coastal Act/30251)	*Potentially consistent - Highway.* The project would include measures to landscape the I-5 NCC project improvements to screen and soften views of the facility and blend with the surrounding environment including sound wall planting pockets, terraced retaining walls, viaduct retaining walls, all of which would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover and, in less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *Potentially consistent – Rail.* The design and development strategies generally include providing landscape treatments such as trees, shrubs, and groundcover along the edge of the ROW to provide partial screening and to visually integrate the ROW into surrounding areas, and implementing native revegetation efforts for areas disturbed by grading activities. Landscaping details would be determined as part of project-specific analyses.

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POLICY 9.5: Discourage development that would infringe upon scenic views and vistas within the I-5 corridor.	*Potentially consistent - Highway.* The I-5 NCC project includes various improvements that would significantly change existing visual resources including removal of existing vegetation and grading of adjacent landforms, new freeway signage, construction of extended paved areas on the roadway, new freeway signage, and new retaining walls and soundwalls that would block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). As such, the project would potentially infringe upon scenic views and vistas within the I-5 corridor. However, the project includes opportunities to underground existing utilities where feasible thereby enhancing scenic views and vistas. In addition, view impacts to the corridor's most significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided. *N/A – Rail.* Rail improvements would not be located within the I-5 corridor.
POLICY 9.6: Where it is necessary to construct retaining or noise-attenuating walls along the I-5 corridor, they should be constructed with natural-appearing materials and generously landscaped with vines, trees and shrubbery. (Coastal Act/30251)	*Potentially consistent - Highway.* The project includes construction of new retaining walls and soundwalls where necessary, and would include measures to minimize impacts to visual resources including architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, and including various methods of landscape screening. *N/A – Rail.* Rail improvements would not be located within the I-5 corridor.
Transportation Corridor The Transportation Corridor category is applied to lands within the I-5 Freeway and the Atchison Topeka and Santa Fe railway corridors. This includes lands under the ownership of the State of California for the freeway, and lands owned or controlled by AT & SF and any subsidiary or successors. These lands are to be reserved and protected for their respective transportation purposes, and shall not allow development or encroachment of any other private use, structure or facility. Compatible public uses/facilities such as landscaping, localized street widening or realignment, development of a "linear park," public automobile parking or shared parking in a public district, and pedestrian, bicycle or trail facilities may be considered. Public support facilities for the primary transportation use such as public transit stations for AMTRAK or commuter rail service within the AT & SF corridor may be considered.	*Potentially consistent – Highway/Rail.* The proposed transportation improvements, facilities and uses are specifically permitted in the Transportation Corridor.

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Ecological Resource/Open Space/Parks This land use designation includes all land that has LU-38 been permanently set aside for the public's use or for the preservation of areas deemed ecologically significant. Much of this land within this category is within the public domain. Some limited private uses, ancillary commercial uses, which serve a public recreation related need may be allowed. This category includes public parks (both County, City and State operated), the beaches, wilderness preserves, San Elijo Lagoon, the major SDG&E transmission corridors, and land that will remain undeveloped due to the presence of severe constraints or significant ecological resources that are owned or controlled by public agencies. In coastal zone ecological resource areas designated Ecological Resource/Open Space/Parks, no private or commercial uses shall be permitted, except for small concessions in conjunction with existing or permitted interpretive and/or nature centers, aquacultural operations and restoration projects. *Paragraph amended 5/11/95 (Reso. 95-32)*	*Potentially consistent – Highway/Rail.* The proposed transportation improvements will result in minor development encroachment into ecological, open space, and park lands, which is inconsistent with the permitted uses identified in this Policy. However, the proposed TREP/PWP is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor. Consistent with this policy, the project is designed to take advantage of new opportunities to enhance these areas for the public's use by providing new recreational opportunities (trails, etc).
Scenic/Visual Corridor Overlay The Coastal Act calls for the identification and preservation of significant viewsheds within the coastal zone. Section 30251 of the Coastal Act states that "the scenic and visual qualities of the 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....". According to the past actions and precedents set by the Coastal Commission, the primary concern of this section of the Coastal Act is the protection of ocean and coastal views from public areas (highways, parks, beach accessways, viewpoints, etc.). This overlay designation identifies those areas of the City where significant aesthetic and visual resources need to be considered before new development proceeds to ensure that significant viewsheds are retained. This overlay will also be used to designate scenic highways and roads in the City.	*Potentially consistent - Highway.* The project would not substantially affect existing open spaces, bluffs or lagoon areas; however, throughout the City the I-5 NCC project includes various improvements that would significantly change existing visual resources including removal of existing vegetation and grading of adjacent landforms, new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining walls and soundwalls that would block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). View impacts to the corridor's most significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided. In addition, TREP/PWP enhancement measures would minimize view impacts to natural features and visual resources through use of architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, and including various methods of landscape screening of facility improvements. In addition, the project also includes opportunities to underground existing utilities where feasible reducing urbanized landscape/features where possible, and opportunities for creating new community pocket parks or public open space areas, thereby enhancing visual resources where feasible.

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	Potentially consistent - Rail. The TREP/PWP includes design and development strategies to address potential visual resource and aesthetics impacts, which would be further evaluated during project-level analyses for new, above-grade rail improvements pursuant to future environmental and/or phased federal consistency review, when applicable.
Special Study Overlay This overlay designation may be applied to a number of land use categories including residential, commercial and industrial. The Special Study Overlay designation will be used for preserving environmentally significant areas, as well as indicate those areas where development standards will be more stringent to minimize potential hazards to future development. The corresponding overlay zones contained in the City's Zoning Ordinance include the Coastal Bluff Overlay Zone district (CBO), Hillside/Inland Bluff Overlay Zone district (H/IBO), Flood Plain Overlay Zone district (FPO), Cultural/ Natural Resource Overlay Zone district (CNRO), Agricultural Overlay Zone district (AGO) and Scenic/Visual Corridor Overlay Zone district (S/VCO).	*Potentially consistent, in part – Highway/Rail.* The entire I-5 NCC corridor and majority of the LOSSAN rail corridor is located in the Special Study Overlay Zone. See preliminary analysis in respective policy sections.
Flooding: The Federal Emergency Management Agency (FEMA) prepared a series of maps identifying those areas of the City that might be subject to flooding in the event of a major storm. These maps, referred to as Flood Insurance Rate Maps (FIRM maps) indicate areas that may be inundated in the event of a 100-year and a 500-year storm and are reproduced in the Public Safety Element Technical Report. In addition, the maps indicate the base flood elevations at selected intervals of the floodway. The maps indicate that there is a potential for flooding from Encinitas Creek, Escondido Creek, and along a number of smaller streams in the Planning Area. Much of the coastal areas would also be affected by high waves resulting from either offshore storms, unusually high tides or a combination of both. Specific mitigation measures are required for new development constructed within these areas to prevent loss of life, injury, and reduce the potential for property damage. Additional flood hazard mapping is needed and until this mapping for the City is completed, existing maps available through the Army Corps of Engineers and the County of San Diego are to be used to define flooding boundaries.	*Potentially consistent – Highway/Rail.* The project involves replacement of the San Elijo and Batiquitos Lagoon bridge crossings within the floodways of these lagoons; however, the improvements are to an existing public roadway or rail facilities, which are allowed uses consistent with Policy 8.2. According to the DI-5 draft EIR/EIS for the I-5 NCC project, site specific mapping and study of floodplains in the project area indicate the 100-year flood would be contained within existing floodplain boundaries at each location and no additional roadways would flood upstream from the proposed highway bridges; therefore, there would be no increased risk to life or property associated with the proposed improvements. Additional, site-specific maps and study for the LOSSAN rail improvements would need to be completed to determine floodplain impacts.
Hillsides/Inland Bluffs: Topography in portions of the Planning Area contain slopes that may be too steep to readily accommodate development. The potential for slope failure and landslides is often high due to grading practices prior to construction and overwatering after hillside developments have been completed. In addition, many hillside areas may fail during an earthquake. Many of these areas with slopes exceeding 25% are located adjacent to the streams that cross the City and form linear bands of open space that generally parallel the streams. Slope constraints are mapped in Figure 1: Land Use Suitability Map included in this Element and in the Public Safety Element Technical Report.	*Potentially consistent - Highway.* The projects involves construction on slopes exceeding 25%; however, the I-5 draft EIR/EIS includes soils and geotechnical studies that document the project will not adversely affect hillside or soil stability. *Potentially consistent - Rail.* It is unknown if rail improvements would be constructed in areas with a slope exceeding than 25%; site-specific soils and geotechnical studies would be completed

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	and appropriate protection measures incorporated prior to development.
Geologic Hazards: The entire Planning Area is located within a seismically active region that has been subject to major earthquakes in the past. The Elsinore and San Jacinto fault zones are the two major active faults located within a fifty mile radius of the City. There may be other major faults that are buried under alluvium or their geomorphological traces have been obliterated due to natural weathering. Two of the most destructive earthquakes that occurred in California in recent years, the Coalinga and Whittier earthquakes, originated from previously unknown faults. There are no known or suspected active faults located in the Planning Area and, as a result, the City is not subject to the provisions of the Alquist-Priolo Act. Previously unknown faults may be discovered in the future which may require additional analysis to determine the potential for surface rupture and other seismic effects. A number of smaller fault traces have been identified in the Planning Area and these are indicated.	*Potentially consistent - Highway.* While the I-5 NCC project is located in an area potentially subject to various geologic hazards, the I-5 draft EIR/EIS incorporates information and recommendations from a Preliminary Geotechnical Report to minimize any potential impacts and ensure geologic stability of the improvements. *Potentially consistent - Rail.* Site-specific soils and geotechnical studies would be completed and appropriate protection measures incorporated prior to development.
Coastal Bluffs: The coastal bluffs are part of the dynamic land-ocean interface that is continually changing. Changes in the patterns of weather, severe storms, and even man-made factors can accelerate the weathering processes that effect the coastline. In recent years, a number of homes and other improvements have been damaged due to bluff failure and there is no indication that these bluffs will become inactive in the near future. For this reason, future intensification of development near the bluff edges is discouraged under the land use policy.	*N/A – Highway/Rail.* The proposed improvements would not be located on or otherwise have any affect on coastal bluffs.
Noise: Noise impacts from traffic and aircraft as well as stationary sources can serve as a constraint to development if mitigation is not possible or if it is overly expensive. The Noise Element describes the existing noise environment using maps that indicate high levels of noise in the Planning Area. The Noise Element also identifies noise sources and recommends goals and policies that will be useful in reducing the effects of noise if not the actual intensity. The land use policy also discourages the placement of noise sensitive land uses in areas that are subject to high noise levels.	*Potentially consistent - Highway.* The project includes construction of soundwalls, where necessary, to reduce potential noise impacts on adjacent land uses. *Potentially consistent – Rail.* Site-specific noise studies would be completed and appropriate noise minimization measures, such as soundwalls, incorporated prior to development.
Agricultural Land: A substantial portion of the Planning Area is involved in agricultural production, mostly cut flowers. Several areas within Encinitas have been identified by the USDA as having prime agricultural soils, though most of the Class III soils elsewhere in the City are well suited to the crops currently grown here. While the presence of prime agricultural soils or ongoing agricultural production is not necessarily a constraint to development, the City, State of California, and the Coastal Commission is alarmed over the amount of agricultural land that has been lost to development.	*Potentially inconsistent - Highway.* The project is potentially inconsistent with the agricultural land use designation and other agricultural resources protection policy of the LCP. The project would affect approximately 18.5 acres of Prime Farmland in the City, potentially affecting the viability of agricultural activities on the unaffected portion of the property. In addition, the western edge of greenhouse and nursery facilities on two Unique Farmland parcels would be impacted by the roadway widening, however, the encroachments would not preclude agricultural activities on the remainder of the parcels. *Potentially consistent – Rail.* Proposed rail improvements would

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	occur adjacent to areas designated as Unique Farmland in the City, but are not anticipated result in adverse affects. Site-specific studies identifying the potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
Cultural/Historic Resources A large number of archaeological sites have been discovered in the Planning Area and, without a doubt, many more sites will be discovered in coming years. All areas within the City and the surrounding unincorporated sphere of influence have been identified as having either a low cultural resource sensitivity, moderate sensitivity, or a high sensitivity. These categories were used in developing the Special Study Overlay included in Figure 1 and corresponds with those high sensitivity areas indicated in the Resource Management Element as having a high sensitivity. These areas are generally unsurveyed wilderness areas or lands under some form of agricultural production where there has been a minimal amount of soil removed or disturbed. Most of these areas are located in the community of Olivenhain and the unincorporated areas within the City's designated sphere of influence. A number of buildings which have historical importance for the City have also been identified in the Resource Management Element Technical Report. A more thorough survey of City-wide historically/architecturally significant resources, and follow-up preservation programs are addressed in the Resource Management Element. In terms of the relationship of these resources with land use/development policy, the presence, significance and protection of cultural/historic resources should be addressed through the City's environmental review processes and zoning regulations. Until more thorough programs for cultural/historic resource preservation can be devised, a system of screening development applications and building/demolition permits shall be implemented to avoid unintended loss of resources.	*Potentially consistent - Highway.* Based on the analysis included in the I-5 draft EIR/EIS the project would not result in significant impacts to cultural resources. A number of archaeological sites that initially were within the project's area of potential effect for cultural resources fell out as the project was redesigned such that the areas would be completely avoided. Only two archaeological sites have been identified that could potentially be adversely affected by the project due to soundwall construction should they be built. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources. *Potentially consistent – Rail.* Site-specific archaeological and paleontological studies would be completed and appropriate mitigation measures, such as avoidance, monitoring or cap and cover, identified and incorporated prior to development.
Ecological Resources A major focus of the policies contained in the Land Use and Resource Management elements is concerned with preserving the rich natural resources located in the wilderness areas. Many unique plant and animal communities are found within the City and residents are concerned that future development will destroy these habitats. Many of these ecologically sensitive areas correspond to those areas with environmental constraints including potential for flooding and steep slopes. The implementation of the land use policy contained in this Element will permit additional development though this growth will be managed in a manner that is consistent with Citywide goals and objectives. The distribution of land uses Citywide is indicated in Table 3.	*Potentially inconsistent, in part – Highway/Rail*. See preliminary policy consistency analysis in respective LCP sections.
HOUSING	*N/A*

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CIRCULATION	
GOAL 1: Encinitas should have a transportation system that is safe, convenient and efficient, and sensitive to and compatible with surrounding community character. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The TREP/PWP's main purpose is to maintain or improve the existing and future multi-modal transportation needs and operations in the I-5 highway corridor and LOSSAN rail corridor in order to improve the safe and efficient regional and community movement of people and goods.
POLICY 1.4: Require, where feasible, interconnecting offstreet pedestrian and vehicular circulation between adjacent commercial and office land uses. This policy should be required along major transportation corridors to minimize traffic conflicts associated with pedestrian and vehicular movement to and from these properties. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The TREP/PWP includes a number of components to improve offstreet pedestrian and bicycle circulation within the City including improvements to pedestrian bridges, overpasses and sidewalks, grade separations, and a number of trail connections.
POLICY 1.15: The City will actively support an integrated transportation program that encourages and provides for mass-transit, bicycle transportation, pedestrians, equestrians, and car-pooling. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The TREP/PWP would create and enhance features for an efficient and integrated transportation program by increasing carpooling and public transit capacity along I-5 within the City and corridor, encouraging alternative modes of transportation by improving the existing LOSSAN rail corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation.
GOAL 2: The City will make every effort to develop a varied transportation system that is capable of serving both the existing population and future residents while preserving community values and character. (Coastal Act/30252/30253)	*Potentially consistent – Highway/Rail.* The TREP/PWP's main purpose is to maintain or improve the existing and future multi-modal transportation needs and operations in the I-5 highway corridor and LOSSAN rail corridor in order to improve the safe and efficient regional movement of people and goods for current and future users. The proposed TREP/PWP would improve the transportation corridors while protecting and enhancing community character with sensitive design and community enhancement features.
POLICY 2.7: The City will emphasize road construction projects which serve the Coast by including coastal access as criterion for prioritizing those routes identified in the multi-year capital improvement program. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The highway and rail improvements would enhance coastal access by reducing congestion and providing designated Managed Lanes that include High Occupancy Vehicle (HOV) use which would serve public transit and families travelling to the coast for visitor-serving and recreational opportunities. In addition, proposed improvements to pedestrian crossings across the rail and highway facilities, and new or improved corridor bike and hiking trails will provide safe, non-automobile dependent routes to and from the coast.

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POLICY 2.22: To avoid impacts of the expansion and improvement of Manchester Avenue on the San Elijo Lagoon and its environmental resources, right-of-way dedication and widening shall occur to the north, away from the lagoon, rather than toward the lagoon; and the use of fill shall be prohibited. The design of the Manchester/I-5 interchange shall also avoid the use of fill and locate structures as far north as possible to avoid impacts on the lagoon. When design and improvement of Manchester Avenue and the interchange are undertaken, the County Department of Parks and Recreation, the State Department of Fish and Game, the Coastal Commission and others will be notified and given the opportunity to participate in the design and environmental review process.	*Potentially consistent - Highway.* The Manchester DAR and transit center improvements would be constructed away from San Elijo Lagoon, opposite Manchester Avenue, consistent with this policy. *N/A - Rail.* The rail improvements would have no affect on the expansion or improvement of the Manchester/I-5 interchange.
GOAL 3: The City of Encinitas will promote the use of other modes of transport to reduce the dependence on the personal automobile. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP would improve pedestrian and bicycle circulation in the City via new pedestrian bridges and overcrossings, grade separations, pedestrian undercrossings and multiple trail improvements.
POLICY 3.2: Continue to assist in expanding public transportation and emphasize public transportation in future development with preference given to cost-effective alternatives. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The highway improvements would provide designated Managed Lanes that include High Occupancy Vehicle (HOV) use that serve public buses. The proposed project also includes other multi-modal improvements, such as improved bicycle and pedestrian facilities and routes that connect with public transit centers, thereby promoting carpooling, and is compatible with Bus Rapid Transit. In addition, rail improvements would encourage alternative modes of public transportation,
POLICY 3.3: Create a safe and convenient circulation system for pedestrians. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP would improve pedestrian circulation in the City via new pedestrian bridges and overcrossings, grade separations, undercrossings and multiple trail improvements.
POLICY 3.4: Cooperate with San Diego County, SANDAG, and other jurisdictions to help plan and implement a regional multi-modal transportation system that is accessible to residents in the City. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP would improve accessibility to the transportation system for City residents by reducing congestion and increasing carpooling and public transit capacity along I-5, encouraging alternative modes of public transportation through rail improvements along the LOSSAN rail corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation.
POLICY 3.11: The City will strive to implement a safe, direct, and convenient circulation system for commuting and recreational bicycle traffic. The City will support the development of additional bicycle facilities in the Coastal Zone, including the following: - all Circulation Element roads will include provisions for bicycle lanes unless precluded by design and safety considerations in which cases, alternative routes shall be provided to form a continuous	*Potentially consistent – Highway/Rail.* The TREP/PWP includes enhancement to bicycle and pedestrian facilities and routes that connect with public transit centers, thereby promoting carpooling, and is compatible with Bus Rapid Transit. The highway improvements would also provide multiple bicycle-friendly linkages to city streets and trails leading to the beach and other open

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network. - the provision of secure bicycle storage facilities at all beaches designated for high and moderate levels of use; and - the installation of bicycle and surfboard racks on all buses serving the Coastal Zone. (Coastal Act/30252)	spaces. In addition, the transportation improvements include overcrossings, undercrossings, and grade separations for pedestrian and bicycle safety.
GOAL 4: The City should make every effort to develop a circulation system that highlights the environmental and scenic amenities of the area. (Coastal Act/30251)	*Potentially consistent – Highway.* The TREP/PWP would not substantially affect existing open spaces, bluffs or lagoon areas; however, throughout the City the proposed I-5 NCC improvements would significantly change existing visual resources including removal of existing vegetation and grading of adjacent landforms, new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining walls and soundwalls that would block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). View impacts to the corridor's most significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided. In addition, TREP/PWP enhancement measures would minimize view impacts to natural features and visual resources through use of architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, and including various methods of landscape screening of facility improvements *Potentially consistent - Rail.* The TREP/PWP includes design and development strategies to address potential visual resource and aesthetics impacts, which would be further evaluated during project-level analyses for new, above-grade rail improvements pursuant to future environmental and/or phased federal consistency review, when applicable.
POLICY 4.1: Design roads to enhance scenic areas. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* See discussion under Goal 4, above.
POLICY 4.2: Promote and encourage roadside and median landscaping. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* See discussion under Goal 4, above.
POLICY 4.3: Separate pedestrian, bicycle, and vehicular traffic by encouraging adequate space for walking and biking by striping roadways, excepting freeways. Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The proposed transportation improvements would improve pedestrian and bicycle circulation by providing new facilities with adequate design to support these multi-modal uses.
POLICY 4.4 *(Policy 4.4 Amended 1/22/03 Reso. No. 03-07)*: The City has adopted a Citywide Recreation	*Potentially consistent – Highway/Rail.* The proposed

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Trails Master Plan to establish a separate system of hiking trails, bicycle paths and equestrian trails from which motorized vehicles shall be banned. The general location and type of each trail is shown on the Recreational Trails Master Plan Map (Recreation Element, Figure 3). Any proposed modifications or additions to the Recreational Trails Master Plan or Recreational Trails Master Plan Map that may directly affect coastal zone resources shall require an LCP amendment.	TREP/PWP includes multiple pedestrian and bicycle trail enhancements and linkages that would be located and designed consistent with the City's trail plans.
POLICY 4.5: Design and construct attractive bike paths and pedestrian ways along existing freeway overpasses and underpasses. Discourage separate pedestrian overpasses. (Coastal Act/30252)	*Potentially inconsistent - Highway.* The project includes separate pedestrian overpasses along the I-5 corridor, which is discouraged; however, this feature is intended to enhance pedestrian circulation and recreational opportunities and improve safety for pedestrians and bicyclists in the City. *N/A - Rail.* The proposed rail improvements would have no affect on freeway overpasses or underpasses.
POLICY 4.7: Encourage consistent signing throughout the city using international sign standards when appropriate. (Coastal Act/30251)	*Potentially consistent - Highway.* New facility signage would include changeable message signs and congestion pricing signage. Any new signage along the I-5 NCC corridor would be consistent with standard Caltrans design throughout the corridor and is generally unobtrusive. *Potentially consistent – Rail.* It is unknown if new signage will be needed along the LOSSAN rail corridor; signage that may be required for safety or related purposes at crossings or grade separations would likely be consistent with existing rail signage.
POLICY 4.9: Prohibit whenever legally possible, or strictly regulate billboards on city streets, roads, freeways, railroad rights-of-way, and lagoons. (Coastal Act/30251/30253)	*Potentially consistent - Highway.* The highway improvements do not include installation of billboards within the corridor; other proposed message signs would meet Caltrans standard design requirements and are generally unobstrusive. *N/A – Rail.* No billboards are proposed as part of the LOSSAN rail corridor improvements.
POLICY 4.12: Encourage undergrounding of utilities within street rights-of-way and transportation corridors. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP includes undergrounding of utilities within the project area, where feasible.
Coastal Access	
GOAL 6: The City will make every effort to provide public access and circulation to the shoreline, through private dedications, easements or other methods, and public transportation or other facilities. (Coastal Act/30211/30212/30212.5/30221)	*Potentially consistent – Highway/Rail.* The TREP/PWP's main purpose is to maintain or improve the existing and future traffic operations in the I-5 and LOSSAN rail north coast corridors, which would directly enhance coastal access by helping to reduce congestion and providing designated Managed Lanes that include

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	High Occupancy Vehicle (HOV) use, thereby benefitting public transit and carpooling to the coast to reach visitor-serving and recreation destinations. In addition, the project would enhance pedestrian circulation and bicycle opportunities to the coast.
POLICY 6.3: The City will encourage continued public vertical access by: - Investigating and identifying all acquired access, improved and unimproved; - Maintaining all City-owned improved access and view points and seeking to improve the unimproved access and view points within the City boundaries; - Cooperating with the State in planning for the Cardiff and San Elijo State Beach areas and the South Carlsbad State Beach area to increase the external accessibility and usability of these beaches, as well as enhancing their visitor-serving potential; and - Supporting continued use of the existing public sea level beach and bluff-backed beach accessways and the establishment of additional accessways, as determined appropriate to maintain adequate public access to public beaches. (Coastal Act/30211/30212/30212.5/30214/30220/30223)	*Potentially consistent - Highway.* The proposed highway improvements would enhance pedestrian access to the San Elijo Lagoon area via a pedestrian crossing and trail. In addition to the reconfigured interchanges, overpasses, and underpasses (all of which would be constructed with pedestrian and bicycle facilities), the proposed community enhancement features would greatly increase connectivity between neighborhoods east and west of I-5, thereby improving beach access. *Potentially consistent – Rail.* The proposed rail improvements, including grade separations and pedestrian crossings, would improve safety and access to coastal resources.
POLICY 6.4: The City will support increased public transportation service to shoreline recreational areas designated for increased visitation, including the following: - Supporting existing and increased levels of service where needed by the North County Transit District; - Supporting low-cost transfers between all transit operators in the Coastal Zone; and - Encouraging the provision of safe transit stops and crosswalks at all major beaches. (Coastal Act/30252) - When bus transportation to beaches is deemed feasible, inset bus bays at major beach transit stops shall be considered to provide safer passenger embarkation/debarkation.	*Potentially consistent – Highway/Rail.* See discussion under Goal 6, above.
Within the coastal zone, design standards for recreational trails shall, at a minimum, comply with the requirements of the Resource Management Element of the certified LUP and any applicable implementing ordinances. Proposed trail alignments within or adjacent to environmentally sensitive habitat areas shall avoid significant disruption to and be compatible with the continuance of those habitat areas. In order to avoid impacts to sensitive areas, placement of recreational trails shall be located within the outer 15 feet of any required buffer area for wetlands, riparian areas and/or other environmentally sensitive habitat, unless it is not feasible to do so. Existing trails are not required to be relocated in order to meet this standard. Any trail development or activities, including clearing, grading, construction, recreational uses or maintenance inconsistent with these requirements shall require an LCP amendment.	*Potentially consistent – Highway/Rail.* The project includes a number of recreational trail improvements intended to facilitate and compliment the City's trail system. Proposed trail location and construction would be implemented consistent with the City's Resource Management Element.
PUBLIC SAFETY	
GOAL 1: Public health and safety will be considered in future Land Use Planning (Coastal Act/30253)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements were designed in consideration of all potential health and safety issues, and have

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	incorporated minimization measures, as needed.
POLICY 1.1: Development and grading or filling in drainage courses, floodways and floodplains shall be prohibited except as provided by Land Use Element Policy 8.2. An exception may be made upon the finding that strict application of this policy would preclude any reasonable use of property (one dwelling unit per legal parcel.) Exceptions may also be made for development of circulation element roads; necessary water supply projects; flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development; developments where the primary function is the improvement of fish and wildlife habitat; and other vital public facilities, but only to the extent that no other feasible alternatives exist, and minimum disruption to the natural floodplain, floodway or drainage course is made. When flood/drainage improvements are warranted, require developers to mitigate flood hazards in those areas identified as being subject to periodic flooding prior to actual development.	*Potentially consistent – Highway/Rail.* The TREP/PWP involves replacement of the San Elijo and Batiquitos Lagoon bridge crossings within the floodways of these lagoons; however, the project would improve existing public roadway and rail facilities providing for potential coastal resource enhancements through design and implementation of reduced footprints within the lagoons, which is consistent with Policy 1.1. In addition, site-specific mapping and study of floodplains in the I-5 and LOSSAN rail corridors would be completed prior to development to identify and mitigate any potential flood hazards; therefore, there would be no increased risk to life or property associated with the proposed improvements.
POLICY 1.2: Restrict development in those areas where slope exceeds 25% as specified in the Hillside/Inland Bluff overlay zone regulations of the zoning code. Encroachment into slopes as detailed in the Hillside/Inland Bluff overlay may range from 0 percent to a maximum of 20 percent, based on a sliding scale of encroachment allowances reflective of the amount of the property within steep slopes, upon the discretionary judgment that there is no feasible alternative siting or design which eliminates or substantially reduces the need for such encroachment, and it is found that the bulk and scale of the proposed structure has been minimized to the greatest extent feasible and such encroachment is necessary for minimum site development and that the maximum contiguous area of sensitive slopes shall be preserved. Within the Coastal Zone and for the purposes of this section, "encroachment" shall constitute any activity which involves grading, construction, placement of structures or materials, paving, removal of native vegetation including clear-cutting for brush management purposes, or other operations which would render the area incapable of supporting native vegetation or being used as wildlife habitat. Modification from this policy may be made upon the finding that strict application of this policy would preclude any reasonable use of property (one dwelling unit per legal parcel). Exceptions may also be made for development of circulation element roads, local public streets or private roads and driveways which are necessary for access to the more developable portions of a site on slopes of less than 25% grade, and other vital public facilities, but only to the extent that no other feasible alternatives exist, and minimum disruption to the natural slope is made. Policy 1.2 amended 5/11/95 (Reso. 95-32)	*Potentially consistent - Highway.* The TREP/PWP improvements would involve construction on slopes exceeding 25%; however, Policy 1.2 provides exceptions for development of circulation element roads and vital public facilities. Further, the Draft EIR/EIS for the I-5 NCC project includes soils and geotechnical studies that document the project will not adversely affect hillside or soil stability. *Potentially consistent - Rail.* It is unknown if rail improvements would be constructed in areas with a slope exceeding than 25%; site-specific soils and geotechnical studies would be completed and appropriate protection measures incorporated prior to development.
POLICY 1.3: The City will rely on the Coastal Bluff and Hillside/Inland Bluff Overlay Zones to prevent future development or redevelopment that will represent a hazard to its owners or occupants, and which may require structural measures to prevent destructive erosion or collapse. (Coastal Act/30240/30251/30253)	*Potentially consistent - Highway.* The I-5 draft EIR/EIS for the I-5 NCC project includes soils and geotechnical studies that document the proposed highway improvements will not adversely affect hillside or soil stability. *Potentially consistent - Rail.* Site-specific soils and geotechnical studies would be completed and appropriate protection measures incorporated prior to development.

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POLICY 1.6: The City shall provide for the reduction of unnatural causes of bluff erosion, as detailed in the Zoning Code, by: a. Only permitting public access stairways and no private stairways, and otherwise discouraging climbing upon and defacement of the bluff face; b. Improving local drainage systems to divert surface water away from the bluff; c. Studying the underground water system and looking for potential solution to bluff instability/erosion caused by such water; d. Reducing the infusion of ground water from domestic sources through, among other actions, requiring the removal of existing irrigation systems within forty feet of the bluff edge and prohibiting the installation of such systems in new development; e. Permitting pursuant to the Coastal Bluff Overlay Zone, bluff repair and erosion control measures on the face and at the top of the bluff that are necessary to repair human-caused damage to the bluff, and to retard erosion which may be caused or accelerated by land-based forces such as surface drainage or ground water seepage, providing that no alteration of the natural character of the bluff shall result from such measures, where such measures are designed to minimize encroachment onto beach areas through an alignment at and parallel to the toe of the coastal bluff, where such measures receive coloring and other exterior treatments and provided that such measures shall be permitted only when required to serve coastal-dependent uses or to protect existing principal structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply; and f. Requiring new structures and improvements to existing structures to be set back 25 feet from the inland blufftop edge, and 40 feet from coastal blufftop edge with exceptions to allow a minimum coastal blufftop setback of no less than 25 feet. For all development proposed on coastal blufftops, a site-specific geotechnical report shall be required. The report shall indicate that the coastal blufftop setback will not result in risk of foundation damage resulting from bluff erosion or retreat to the principal structure within its economic life and with other engineering evidence to justify the coastal blufftop setback. On coastal bluffs, exceptions to allow a minimum setback of no less than 25 feet shall be limited to additions or expansions to existing principal structures which are already located seaward of the 40 foot coastal blufftop setback, provided the proposed addition or expansion is located no further seaward than the existing principal structure, is set back a minimum of 25 feet from the coastal blufftop edge, and the applicant agrees to remove the proposed addition or expansion, either in part	*N/A – Highway/Rail.* The TREP/PWP transportation improvements within the City do not include or involve development of coastal bluffs.

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or entirely, should it become threatened in the future. In all cases, all new construction shall be specifically designed and constructed such that it could be removed in the event of endangerment and the applicant shall agree to participate in any comprehensive plan adopted by the City to address coastal bluff recession and shoreline erosion problems in the City. This does not apply to minor structures that do not require a building permit, except that no structures, including walkways, patios, patio covers, cabanas, windscreens, sundecks, lighting standards, walls, temporary accessory buildings not exceeding 200 square feet in area, and similar structures shall be allowed within five feet from the bluff top edge; and g. Permanently conserving the bluff face within an open space easement or other suitable instrument. (Coastal Act/30210/30235/30240/30251/30253) Standards for the justification of preemptive erosion control devices and limits on location of shoreline devices shall be as detailed in the Zoning Code. Policy 1.6 amended 5/11/95 (Reso. 95-32)	
POLICY 1.7: The City shall develop and adopt a comprehensive plan, based on the Beach Bluff Erosion Technical Report (prepared by Zeiser Kling Consultants Inc., dated January 24, 1994), to address the coastal bluff recession and shoreline erosion problems in the City. Said plan shall include, at minimum, components that deal with all the factors affecting the bluffs in Encinitas. These include, but are not limited to, minimum blufftop setback requirements for new development/redevelopment; alternatives to shore/bluff protection such as beach sand replenishment; removal of threatened portions of a residence or the entire residence or underpinning existing structures; addressing bluff stability and the need for protective measures over the entire bluff (lower, mid and upper); impacts of shoreline structures on beach and sand areas as well as mitigation for such impacts; impacts of groundwater and irrigation on bluff stability; and, visual impacts of necessary/required protective structures.	*N/A – Highway/Rail.* The TREP/PWP transportation improvements within the City do not include or involve development of coastal bluffs.
If a comprehensive plan is not submitted to, reviewed and approved by the Coastal Commission as an amendment to this land use plan by November 17, 1995, then no additions or expansions to existing structures shall be permitted on coastal blufftop lots except for minor additions or expansions that comprise no greater than a 10 percent increase above the existing gross floor area or 250 square feet whichever is greater, provided such additions/expansions are located at least 40 feet from the coastal blufftop edge, the addition/expansion is constructed in a manner so that it could be removed in its entirety, and the applicant agrees, in writing, to participate in any comprehensive plan adopted by the City to address coastal bluff recession and shoreline erosion problems in the City. In addition, until such a comprehensive plan is approved by the City of Encinitas and the Coastal Commission as an amendment to the LCP, the City shall not permit the construction of seawalls, revetments, breakwaters, cribbing, or similar structures for coastal erosion except under circumstances where an existing principal structure is imminently threatened and, based on a thorough alternatives analysis, an emergency coastal development permit is issued and all emergency measures authorized by the emergency coastal	*N/A – Highway/Rail.* The TREP/PWP transportation improvements within the City do not include or involve development of coastal bluffs.

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development permit are designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Policy 1.7 amended 5/11/95 (Reso. 95-32)	
POLICY 2.6: Except as provided in Public Safety Policy 1.1, no development or filling shall be permitted within any 100-year floodplain.	*Potentially consistent – Highway/Rail*. The TREP/PWP involves replacement of the San Elijo and Batiquitos Lagoon bridge crossings within the floodways of these lagoons; however, the project would improve existing public roadway and rail facilities providing for potential coastal resource enhancements through design and implementation of reduced footprints within the lagoons, which is consistent with Policy 1.1. In addition, site-specific mapping and study of floodplains in the I-5 and LOSSAN rail corridors would be completed prior to development to identify and mitigate any potential flood hazards; therefore, there would be no increased risk to life or property associated with the proposed improvements.
POLICY 3.4: Land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials will be located a safe distance from land uses that may be adversely impacted by such activities. (Coastal Act/30250)	*Potentially consistent – Highway.* Chemical spills from truck and auto accidents have historically occurred along I-5 but location and occurrence of potential future spills are unknown. However, this is an existing land use and the proposed project remains within or directly adjacent to the existing I-5 alignment to avoid and/or minimize expansion of the land use and associated hazards to adjacent areas. A contingency would be written into the construction contract to deal with this potential hazardous materials issue. *Potentially consistent – Rail.* Site-specific studies would be completed prior to development, and protection measures incorporated to avoid hazardous materials impacts. TREP/PWP calls for protection against the spillage of crude oil, gas, petroleum products, or hazardous substances and that effective containment and cleanup facilities and procedures be in place for accidental spills that do occur.
RESOURCE MANAGEMENT	
Quality of Water and Groundwater Resoures	
GOAL 1: The City will conserve, protect, and enhance the water resources in the Planning Area. (Coastal Act/30231)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements would minimize potential impacts to ground, surface and ocean water quality during all phases of the project through implementation and adherence to BMPs, and would potentially enhance long-term water quality in the corridor through possible restoration of water quality and tidal

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	circulation of lagoons and improvements to conveyance of stream flow and sediment transport from inland areas. Benefits to water quality from the proposed rail improvements could result also from the reduction in vehicle miles traveled on area highways that may occur with increased and improved rail service as fewer roadway pollutants would be present in the surface run-off from the roadways. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor.
POLICY 1.2: Cooperate with the Federal, State, and County governments and surrounding jurisdictions concerning the maintenance and improvement of water quality from local groundwater sources. (Coastal Act/30231)	*Potentially consistent – Highway/Rail.* See discussion under Goal 1, above.
POLICY 1 3: The City will implement a program for both the using and sale of treated wastewater from a new wastewater treatment facility. The City should attempt to use the treated wastewater for the landscaping of transportation corridors, parks and recreation areas, and other public uses. (Coastal Act/30231)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements would utilize reclaimed water for new landscaping in areas adjacent to native habitat, wherever feasible.
Quality of Ocean Waters	
GOAL 2: The City shall make every effort to improve ocean water quality. (Coastal Act/30231)	*Potentially consistent – Highway/Rail.* See discussion under Goal 1, above. In addition, TREP/PWP improvements could potentially facilitate passage of fish and other aquatic species, and restore natural shoreline processes thereby enhancing biological productivity of marine resources and water quality and would not result in channelization of coastal streams.
POLICY 2.1: In that ocean water quality conditions are of utmost importance, the City shall aggressively pursue the elimination of all forms of potential unacceptable pollution that threatens marine or human health. (Coastal Act!30230/30231)	*Potentially consistent – Highway/Rail.* See discussion under Goals 1 and 2, above.
POLICY 2.3: To minimize harmful pollutants from entering the ocean environment from lagoons, streams, storm drains and other waterways containing potential contaminants, the City shall mandate the reduction or elimination of contaminants entering all such waterways; pursue measures to monitor the quality of such contaminated waterways, and pursue prosecution of intentional and grossly negligent polluters of such waterways. (Coastal Act/30230/3023l/30233)	*Potentially consistent – Highway/Rail.* See discussion under Goals 1 and 2, above.
Preservation of Trees and Habitat	
GOAL 3: The City will make every effort possible to preserve significant mature trees, vegetation and wildlife habitat within the Planning Area. (Coastal 30240)	*Potentially consistent - Highway.* The proposed project would result in loss of groupings and individual mature trees. However, mature trees would be preserved to the extent feasible and new trees would be planted with proposed improvements. *Potentially consistent - Rail.* Specific tree loss in relation to rail

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	improvement is unknown. Site-specific studies identifying the potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
POLICY 3.2: Mature trees shall not be removed or disturbed to provide public right-of-way improvements if such improvements can be deferred, redesigned, or eliminated. This policy is not meant to conflict with the establishment of riding/hiking trails and other natural resource paths for the public good, or with the preservation of views.	*Potentially inconsistent - Highway.* Highway improvements would result in loss of groupings and individual mature trees. However, mature trees would be preserved to the extent feasible and new trees would be planted with proposed improvements. *Potentially inconsistent - Rail.* Specific tree loss in relation to rail improvement is unknown. Site-specific studies identifying the potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
Community Views, Vistas, and Aesthetic Qualities	
GOAL 4: The City, with the assistance of the State, and Regional Agencies, shall provide the maximum visual access to coastal and inland views through the acquisition and development of a system of coastal and inland vista points. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements would potentially facilitate this policy as parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, thereby creating new open space and vista points. Proposed rail improvements would be completed generally in existing rail right-of-way and would not adversely impact the City's designated vista points that provide views to coastal and inland viewsheds. In addition, applying sensitive site design, and the design and development strategies and policies and implementation measures included in the TREP/PWP, rail and highway development would be compatible with surrounding developed and open space areas within the City.
POLICY 4.1: The following Vista Points and others will be acquired and developed, as feasible: • San Elijo & Kilkenny (overlooking lagoon & coast) • Highway 101, north of La Costa Avenue • Northeast and northwest corner of 1-5 and La Costa Avenue • Encinitas Community Park site (Coastal Act/3025l)	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements would have no significant adverse impacts on the identified Vista Points, and would not preclude the City's ability to acquire or develop them.

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POLICY 4.2: The following Vista Points will be developed and maintained as feasible: • Orpheus Street Park site • Oak Crest Park site • West end of "0" Street • West end of "F" Street • West end of "J" Street (Coastal Act/30251)	*N/A – Highway/Rail.* The TREP/PWP improvements would have no impact on the identified Vista Points, and would not preclude the City's ability to develop or maintain them.
POLICY 4.3: The following Vista Points will be maintained as needed, and upgraded as necessary: • Leucadia Beach State Park • West end of "I" Street • Moonlight State Beach • Swami's City Park • Existing Vista Point on southbound 1-5 • Cardiff Beach State Park (south parking lot) (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements would have no significant adverse impacts on the identified Vista Points, and would not preclude the City's ability to maintain or upgrade them.
POLICY 4.4: The system of Vista Points will provide for the differing needs of automobile, bicycle, and pedestrian users, and will recognize as a recreational resource, the function of Vista Points as facilities for the passive, and occasionally remote enjoyment of the coastal and inland view. (Coastal Act/30251/30252/30210)	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements would have no significant adverse impacts on the identified Vista Points.

POLICY 4.5: The City will designate "Scenic/Visual Corridor overlay" areas within which the character of development would be regulated to protect the integrity of the Vista Points according to the following criteria:
 	
- Critical viewshed areas should meet the following requirements:
  • extend radially for 2,000 feet (610M) from the Vista Point; and
  • cover areas upon which development could potentially obstruct, limit, or degrade the view.
 	
- Development within the critical viewshed area should be subject to design review based on the following;
  • building height, bulk, roof line and color and scale should not obstruct, limit or degrade the existing views;
  • landscaping should be located to screen adjacent undesirable views (parking lot areas, mechanical equipment, etc.) (Coastal Act/30251/30253)
	Potentially consistent – Highway/Rail. The TREP/PWP improvements would have no significant adverse impacts on the identified Vista Points. Proposed transportation improvements would be completed generally in existing right-of-way and would not adversely impact the City's designated vista points that provide views to coastal and inland viewsheds. In addition, applying sensitive site design, and the design and development strategies and policies and implementation measures included in the TREP/PWP, rail and highway development would be compatible with surrounding developed and open space areas within the City.

POLICY 4.6: The City will maintain and enhance the scenic highway/visual corridor viewsheds. (Coastal Act/30251)	*Potentially consistent - Highway.* The TREP/PWP includes measures to landscape the I-5 NCC project improvements to screen and soften views of the facilities and blend with the

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	surrounding environment, including sound wall planting pockets, terraced retaining walls, and viaduct retaining walls, all of which would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *N/A – Rail.* The rail improvements would have no affect on designated scenic highway/visual corridor viewsheds, including the I-5 at San Elijo Lagoon.
POLICY 4 7: The City will designate the following view corridors as scenic highway/visual corridor viewsheds: • Interstate 5, crossing San Elijo Lagoon (Coastal Act/30251/30253)	*Potentially consistent - Highway.* The TREP/PWP would have no significant adverse impact on this viewshed, as detailed in the viewshed policies above. Proposed improvements would be completed generally in existing right-of-way and would not adversely impact the City's designated vista points that provide views to coastal and inland viewsheds. In addition, applying sensitive site design, and the design and development strategies and policies and implementation measures included in the TREP/PWP, rail and highway development would be compatible with surrounding developed and open space areas within the City. *N/A – Rail.* The rail improvements would have no affect on designated scenic highway/visual corridor viewsheds, including the I-5 at San Elijo Lagoon.
POLICY 4.8: The City will designate scenic/Visual Corridor Overlay and scenic highway viewshed areas as illustrated on the Visual Resource Sensitivity Map (Figure 3). (Coastal Act/J0251)	*Potentially consistent - Highway.* The TREP/PWP is subject to the Visual Corridor Overlay and is designed to be consistent with the Overlay provisions to the maximum extent feasible. *N/A – Rail.* The rail improvements would have no affect on designated scenic highway/visual corridor viewsheds, including the I-5 at San Elijo Lagoon.
POLICY 4.9: It is intended that development would be subject to the design review provisions of the Scenic/Visual Corridor Overlay Zone for those locations within Scenic View Corridors, along scenic highways and adjacent to significant viewsheds and vista points with the addition of the following design criteria:	*Potentially consistent - Highway.* The TREP/PWP would not be subject to the City's design review process; however, the highway improvements would include measures to landscape the I-5 NCC project improvements to screen and soften views of the facility and

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- Road Design • Type and physical characteristics of roadway should be compatible with natural character of corridor, and with the scenic highway function.	blend with the surrounding environment including sound wall planting pockets, terraced retaining walls, viaduct retaining walls, which would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *N/A – Rail.* The rail improvements would have no affect on designated scenic highway/visual corridor viewsheds, including the I-5 at San Elijo Lagoon.
POLICY 4.10: The City will develop a program to preserve views that also preserves the appropriate vegetation and removes obstacles that impact views. Trees and vegetation which are themselves part of the view quality along the public right-of-way will be retained. (Coastal Act/30251)	*Potentially inconsistent - Highway.* The proposed project will result in loss of groupings and individual mature trees. Trees would be preserved to the extent feasible and new trees planted as part of the highway improvements landscape plan. *Potentially inconsistent - Rail.* Specific tree loss in relation to rail improvement is unknown. Site-specific studies identifying the potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
Air Quality	
GOAL 5: The City will make every effort to participate in programs to improve air and water quality in the San Diego region. (Coastal Act/30231)	*Potentially consistent – Highway/Rail.* The TREP/PWP transportation improvements would potentially enhance water quality in the corridor with improved stormwater runoff treatment opportunities and comprehensive lagoon and habitat enhancement plans, and through facilitating alternative modes of transportation and enhanced public transit opportunities, it would likewise serve to minimize potential air quality impacts through reduced vehicle miles traveled.
Preservation of Cultural Resources	
GOAL 7: The City will make every effort to ensure significant scientific and cultural resources in the Planning Area are preserved for future generations. (Coastal Act/30250)	*Potentially consistent - Highway.* No historic resources would be adversely affected by the proposed TREP/PWP improvements. A number of archaeological sites that initially were within the

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	project's area of potential effect for cultural resources fell out as the project was redesigned such that the areas would be completely avoided. Only two archaeological sites have been identified that could potentially be adversely affected by the project due to soundwall construction should they be built. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources. *Potentially consistent – Rail.* Site-specific cultural resources studies would be completed and appropriate mitigation measures, such as avoidance, monitoring or cap and cover identified and incorporated prior to development.
POLICY 7.1: Require that paleontological, historical and archaeological resources in the planning area are documented, preserved or salvaged if threatened by new development. (Coastal Act/30250)	*Potentially consistent – Highway/Rail.* See discussion under Goal 7, above.
POLICY 7 2: Conduct a survey to identify historic structures and archaeological/cultural sites throughout the community and ensure that every action is taken to ensure their preservation. (Coastal Act/30250/30253(5)	*Potentially consistent – Highway/Rail.* See discussion under Goal 7, above.
POLICY 7.4: The City will encourage the development of cultural facilities to be made available to the public, such as performing arts theaters, museums, and libraries. (Coastal Act/30250)	*Potentially consistent - Highway.* The TREP/PWP includes an archaeological interpretative element at a Vista Point Overlook to be located along southbound I-5 just north of Manchester Avenue. *Potentially consistent – Rail.* Site-specific cultural resources studies would be completed prior to development.
Preservation of Coastal Areas	
GOAL 8: The City will undertake programs to ensure that the Coastal Areas are maintained and remain safe and scenic for both residents and wildlife. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* The project is designed to preserve and minimize adverse impacts to significant visual and natural areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor.
POLICY 8.5: The City will encourage the retention of the coastal bluffs in their natural state to minimize the geologic hazard and as a scenic resource. Construction of structures for bluff protection shall only be	*N/A – Highway/Rail.* The TREP/PWP transportation improvements do not include or involve development of coastal

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permitted when an existing principal structure is endangered and no other means of protection of that structure is possible. Only shoreline/bluff structures that will not further endanger adjacent properties shall be permitted as further defined by city coastal bluff regulations Shoreline protective works, when approved, shall be aligned to minimize encroachment onto sandy beaches. Beach materials shall not be used as backfill material where retaining structures are approved. Approved devices protecting against marine waves shall be designed relative to a design wave, at least equal to 1982 -83 winter storm waves. (Coastal Act/3023S/30240/30251/30253)	bluffs.
POLICY 8.6: The City will encourage measures which would replenish sandy beaches in order to protect coastal bluffs from wave action and maintain beach recreational resources. The City shall consider the needs of surf-related recreational activities prior to implementation of such measures. (Coastal Act/30233/30235)	*N/A – Highway/Rail.* The TREP/PWP does not include or involve development of coastal bluffs or activities that would affect sand replenishment.
POLICY 8.7: The City will establish, as primary objectives, the preservation of natural beaches and visual quality as guides to the establishment of shoreline structures. All fishing piers, new boat launch ramps, and shoreline structures along the seaward shoreline of Encinitas will be discouraged. (Coastal Act/30233/3023S/30251)	*N/A – Highway/Rail.* The TREP/PWP does not include or involve development of fishing piers, new boat launch ramps, and shoreline structures along the seaward shoreline of Encinitas.
Plant Resources and Landscaping	
GOAL 9: The City will encourage the abundant use of natural and drought tolerant landscaping in new development and preserve natural vegetation, as much as possible, in undeveloped areas. (Coastal Act/30240/30251)	*Potentially consistent - Highway.* The TREP/PWP includes measures to landscape the I-5 NCC project improvements with noninvasive drought tolerant ornamental trees, shrubs, and to provide groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The project has been designed to minimize encroachment into naturally vegetated and undeveloped areas as much as possible. *Potentially consistent – Rail.* The proposed TREP/PWP rail improvements would utilize natural and drought tolerant landscaping in areas adjacent to native habitat, wherever feasible. Landscaping plans would be prepared and submitted for approvals prior to development.
POLICY 9.1: The City will initiate and pursue the landscaping of appropriate median and parking areas with trees on all new and existing arterial streets. (Coastal Act/30251)	*Potentially consistent - Highway.* The TREP/PWP would include measures to landscape the I-5 NCC project improvements to screen and soften views of the facility and blend with the surrounding environment including sound wall planting pockets, terraced retaining walls, viaduct retaining walls, which would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive

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	drought tolerant ornamental trees, shrubs, and groundcover would be installed. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *Potentially consistent – Rail.* The proposed TREP/PWP rail improvements would provide appropriate landscaping consistent with City policy, including at the proposed new Encinitas Station parking. Landscaping plans would be prepared and submitted for approvals prior to development.
POLICY 9.2: All drainage courses should be maintained in natural or semi-natural vegetation utilizing existing topography as opposed to concrete ditches or pipes. (Coastal Act/30231/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP would include habitat preservation and/or restoration of riparian habitat areas within affected City waterways in the corridor.
POLICY 9.3: Where possible, bridges should be used in lieu of pipes, box culverts, or underground channels to preserve the integrity of the natural stream courses, in keeping with community character in the planning area. (Coastal Act/30231/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP does not include new pipes, box culverts or underground channels that would adversely affect natural stream courses, but provides an opportunity to preserve and/or restore riparian habitat areas within affected City waterways in the corridor.
POLICY 9.4: Encourage and adopt standards for the use of drought tolerant and/or natural landscaping and efficient irrigation systems throughout the City. (Coastal Act/30231/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP would include landscaping with noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist.
POLICY 9.5: Encourage and adopt standards for clean-up, landscaping, beautification, utility undergrounding, and additional landscaping in parking facilities where needed in existing commercial areas (Coastal Act/30251/30252)	*Potentially consistent – Highway/Rail.* See discussion above. In addition, the TREP/PWP includes opportunities to underground existing utilities where feasible thereby enhancing visual resources and reducing urbanized landscape/features where possible.
POLICY 9.8: Brush clearing and grading for agricultural, construction and non-construction purposes shall be subject to City review. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP involves continued coordination with the City to ensure potential impacts of grading and vegetation removal for project construction are minimized and mitigated to the maximum extent feasible.
POLICY 9.9: The City shall develop and implement a program to preserve natural drainage courses and their associated vegetation. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP would include habitat preservation and/or restoration of riparian habitat areas within affected City waterways in the corridor.
Preservation of Environmentally Sensitive Habitats	

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GOAL 10: The City will preserve the integrity, function, productivity, and long term viability of environmentally sensitive habitats throughout the City, including kelp-beds, ocean recreational areas, coastal water, beaches, lagoons and their up-lands, riparian areas, coastal strand areas, coastal sage scrub and coastal mixed chaparral habitats. (Coastal Act/30230/30231/30240)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP improvements are designed to preserve and minimize adverse impacts to significant environmentally sensitive habitat areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor. The proposed TREP/PWP would also minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor with project BMPs designed to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor.
POLICY 10.1: The City will minimize development impacts on coastal mixed chaparral and coastal sage scrub environmentally sensitive habitats by preserving within the inland bluff and hillside systems, all native vegetation on natural slopes of 25% grade and over other than manufactured slopes. A deviation from this policy may be permitted only upon a finding that strict application thereof would preclude any reasonable use of the property (one dwelling unit per lot). This policy shall not apply to construction of roads of the City's circulation element, except to the extent that adverse impacts on habitat should be minimized to the degree feasible. Encroachments for any purpose, including fire break brush clearance around structures, shall be limited as specified in Public Safety policy 1.2. Brush clearance, when allowed in an area of sensitive habitat or vegetation, shall be conducted by selective hand clearance. (Coastal Act/30240/30250/3D251/30253)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements would potentially result in impacts to coastal mixed chaparral and coastal sage scrub; however, the project involves improvements to an existing public roadway which is specifically provided for in Policy 10.1 and adverse impacts on habitat would be minimized to the degree feasible. Site-specific habitat studies would be completed for rail improvements and appropriate minimization measures incorporated prior to development.
POLICY 10 3: The City shall explore the prevention of beach sand erosion. Beaches shall be artificially nourished with excavated sand whenever suitable material becomes available through excavation or dredging, in conjunction with the development of a consistent and approved project_ The City shall obtain necessary permits to be able to utilize available beach replenishment sands (as necessary, permits from the Army Corps of Engineers, California Coastal Commission, Department of Fish and Game, EPA, etc) (Coastal Act/30232)	*N/A – Highway/Rail.* The TREP/PWP does not include or involve development on the shoreline or on coastal bluffs or activities that would affect beach erosion or sand replenishment.
POLICY 10.4: The City will develop a program to acquire or preserve the entire undeveloped riparian corridor within the City that drains into the San Elijo Lagoon and Batiquitos Lagoon. Methods of financing acquisition may include, but are not limited to, use of available State and Federal grants for such purpose: the application of developer or mitigation fees specifically for open space presentation; and creations of a non-profit or joint-powers agency for lagoon and drainage sheds acquisition and management. (Coastal Act/30231/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP would facilitate this policy as it includes preservation and/or restoration of habitat via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor.
POLICY 10.5: The City will control development design on Coastal Mixed Chaparral and Coastal Sage	*Potentially consistent – Highway/Rail.* See discussion under

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Scrub environmentally sensitive habitats by including all parcels containing concentrations of these habitats within the Special Study Overlay designation. The following guidelines will be used to evaluate projects for approval. • Conservation of as much existing contiguous area of Coastal Mixed Chaparral or Coastal Sage Scrub as feasible while protecting the remaining areas from highly impacting uses; • Minimize fragmentation or separation of existing contiguous natural areas; • Connection of existing natural areas with each other or other open space areas adjacent to maintain local wildlife movement corridors; • Maintenance of the broadest possible configuration of natural habitat area to aid dispersal of organisms within the habitat; • Where appropriate, based on community character and design, clustering of residential or other uses near the edges of the natural areas rather than dispersing such uses within the natural areas; • Where significant, yet isolated habitat areas exist, development shall be designed to preserve and protect them; • Conservation of the widest variety of physical and vegetational conditions on site to maintain the highest habitat diversity; • Design of development, with adjacent uses given consideration, to maximize conformance to these guidelines; and • Preservation of rare and endangered species on site rather than by transplantation off site. (Coastal Act/30240/30250) In addition, all new development shall be designed to be consistent with multi-species and multi-habitat preservation goals and requirements as established in the statewide Natural Communities Conservation Planning (NCCP) Act. Compliance with these goals and requirements shall be implemented in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Policy 10.5 amended 5/11/95 (Reso. 95-32)	Policy 10.1, above. The project includes opportunities for preservation and/or restoration of these areas via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor.
POLICY 10.6: The City shall preserve and protect wetlands within the City's planning area. "Wetlands" shall be defined and delineated consistent with the definitions of the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, the Coastal Act and the Coastal Commission Regulations, as applicable, and shall include, but not be limited to, all lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. There shall be no net loss of wetland acreage or resource value as a result of land use or development, and the City's goal is to realize a net gain in acreage and value when ever possible. Within the Coastal zone, the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted where there is no feasible less environmentally damaging alternative, and where	*Potentially inconsistent - Highway/Rail.* Highway and rail transportation improvements would result in minor development encroachments potentially resulting in direct impacts to coastal wetlands within the City. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique

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feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following newly permitted uses and activities a. Incidental public service projects. b. Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. c. Restoration purposes d. Nature study, aquaculture, or other similar resource dependent activities. Identification of wetland acreage and resource value shall precede any consideration of use or development on sites where wetlands are present or suspected. With the exception of development for the primary purpose of the improvement of wetland resource value, all public and private use and development proposals which would intrude into, reduce the area of, or reduce the resource value of wetlands shall be subject to alternatives and mitigation analyses consistent with Federal E.P.A 404(b) (1) findings and procedures under the U.S. Army Corps permit process. Practicable project and site development alternatives which involve no wetland intrusion or impact shall be preferred over alternatives which involve intrusion or impact. Wetland mitigation, replacement or compensation shall not be used to offset impacts or intrusion avoidable through other practicable project or site development alternatives. When wetland intrusion or impact is unavoidable, replacement of the lost wetland shall be required through the creation of new wetland of the same type lost, at a ratio determined by regulatory agencies with authority over wetland resources, but in any case at a ratio of greater than one acre provided for each acre impacted so as to result in a net gain. Replacement of wetland on-site or adjacent, within the same wetland system, shall be given preference over replacement off-site or within a different system. The City shall also control use and development in surrounding areas of influence to wetlands with the application of buffer zones. At a minimum, 100-foot wide buffers shall be provided upland of salt water wetlands, and 50-foot wide buffers shall be provided upland of riparian wetlands. Unless otherwise specified in this plan, use and development within buffer areas shall be limited to minor passive recreational uses with fencing, desiltation or erosion control facilities, or other improvements deemed necessary to protect the habitat, to be located in the upper (upland) half of the buffer area when feasible. All wetlands and buffers identified and resulting from development and use approval shall be permanently conserved or protected through the application of an open space easement or other suitable device. The City shall not approve subdivisions or boundary line adjustments which would allow increased impacts from development in wetlands or wetland buffers. (Coastal Act/30231l Policy 10.6 amended 1/30/91 and 5/11/95 (Reso. 95-32)	opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. As the existing location of the facilities requires that the proposed projects occur in areas within and adjacent to wetlands, the project would not provide the minimum 100- and 50-foot wetland buffers and would also result in unpermitted uses in required buffers. However, the proposed project is designed to preserve and minimize adverse impacts to wetlands and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. However, the proposed restoration efforts may not result in a no net loss of sensitive upland habitat solely within the City boundaries. As discussed under Policy 2.8 above, the proposed improvements would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation of BMPs so as not to contribute to increased sediment loading of adjacent wetland/riparian areas.
POLICY 10.7: The City will urge the State to preservation measures relative to Coastal Strand Dune development of State beach areas. (Coastal Act/30240)	*N/A – Highway/Rail.* The project does not involve Coastal Strand Dune development of State beach areas.

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POLICY 10.8: The City will investigate the establishment of one or more preserves for the preservation of endangered plant species, such as the Encinitas Baccharis, of sufficient size to ensure perpetuation of the species. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP transportation improvements may help facilitate this policy as it includes preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor.
POLICY 10.9: The City will encourage the preservation and the function of San Elijo Lagoon and Batiquitos Lagoon and their adjacent uplands as viable wetlands, ecosystems and habitat for resident and migratory wildlife, by prohibiting actions (subject to the detailed provisions of RN policy 10.6) which: - involve wetland fill or increased sedimentation into wetlands; - adversely decrease stream flow into the wetlands; - reduce tidal interchange; - reduce internal water circulation; or - adversely affect existing wildlife habitats. (Coastal Act/30231)	*Potentially inconsistent – Highway/Rail.* See discussion for Policy 10.6, above.
POLICY 10.10: The City will encourage and cooperate with other responsible agencies to plan and implement an integrated management plan for the long-term conservation and restoration of wetlands resources at San Elijo Lagoon (and where it applies, Batiquitos Lagoon), Escondido and Encinitas Creeks and their significant upstream feeder creeks, according to the following guidelines: - Plans for the west, central and eastern basins should be treated as internal parts of the whole; - The plan should be implemented in phases so that discreet physical alterations can be performed as funds become available, and so that the effects of changes can be evaluated at each stage, and recognizing the experimental basis of wetland manipulations; - Wildlife corridors between the wetland shoreline and important upland areas and upstream riparian areas should be maintained and enhanced; - Adequate buffer zones should be utilized when development occurs adjacent to the floodplain and sensitive habitats; 100 foot wide buffers should be provided adjacent to all identified wetlands and 50 foot wide buffers should be provided adjacent to riparian areas. In some cases, smaller buffers may be appropriate, when conditions of the site as demonstrated in a site specific biological survey, the nature of the proposed development, etc., show that a smaller buffer would provide adequate protection; and when the Department of Fish and Game has been consulted and their comments have been accorded great weight. - Management plans should implement adopted State and Federal wildlife management plans (i.e., California Least Tern Recovery Plan, etc.); - Human uses of the wetland and adjacent areas should be compatible with the primary use of the wetland as a natural value; - Passive recreational activity at the lagoons should be encouraged to the extent there are no substantial adverse impacts to wildlife;	*Potentially inconsistent - Highway/Rail.* The existing location of the transportation facilities requires that the proposed improvements occur in areas containing wetlands and riparian habitat; therefore the project would not provide the standard minimum 100 foot wetland buffer and 50 foot riparian buffer recommended by Policy 10.10. The TREP/PWP provides a unique opportunity to facilitate a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, and also includes preservation and/or restoration via land purchase of wetland/upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. As discussed above, the TREP/PWP includes BMPs to minimize sediment loading of adjacent wetland/riparian areas, potentially enhancing long-term water quality in the corridor and minimizing potential impacts to ground, surface and ocean water quality during all phases of the project to the maximum extent feasible.

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- There should be limited human access to the wetland shoreline since the immediate wetland shoreline and adjacent shallows are the most important sensitive wildlife habitat; - Boating and other water surface activities should not be allowed in significant wildlife habitat areas, particularly in the central and east basins of the San Elijo Lagoon and parts of the west basin supporting significant waterbird populations; - The plan should include a provision for sediment catch basins or other control devices outside the wetland area and should allow for periodic removal of recently accumulated sediment from the lagoon until a long-range sediment control plan is operational, Plans should attempt to optimize the habitat for species already known to use the wetlands, as well as certain "featured" species recognized as depleted, rare, or endangered (California Least Tern, Belding's Savannah Sparrow/Snowy Plover, and other species recommended by wildlife management agencies) to the extent feasible; - The integrity of the existing natural system (in particular, topography, hydrology, and vegetative cover) should not be disturbed, except as required to restore internal lagoon water circulation, tidal flushing, and plant habitat improvements; - Adequate monitoring of chemical, physical and biological changes should be carried out for periodic re-evaluation of the management plan and maintenance of optimal conditions; - Rare and significant habitats such as coastal strand (dunes), salt flats and fresh water ponds existing in and around the lagoon should not be reduced or degraded; - High priority shall be given to actions which serve to remove impediments to internal lagoon water circulation (except where such areas are significant wildlife habitats in their own right) and improving tidal flow with the ocean; - It shall be a long-range goal to remove the flow blockage such as that caused by existing fills for transportation facilities and by existing dikes to the extent necessary to create an adequate internal water circulation system. (Coastal Act/30231/30233)	
POLICY 10.11: In acting to maintain and, where feasible, restore the biological productivity and quality of San Elijo Lagoon, the City will limit alterations and uses to minor public facilities; restorative measures; nature study; passive, non-degrading recreational activities; and facilities necessarily adjunct aquaculture uses. No recreational boating facilities will be permitted in San Elijo Lagoon. Coastal-dependent developments (i.e., utility facilities, boating facilities, etc) shall not be sited in the wetland area (San Elijo Lagoon and contiguous wetlands). {Coastal Act/30231}	*Potentially inconsistent - Highway/Rail.* Highway and rail transportation improvements would result in minor development encroachments potentially resulting in direct impacts to coastal wetlands within the City. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. The TREP/PWP improvements would involve minimal encroachment into the San Elijo Lagoon and would provide a unique opportunity to facilitate a comprehensive program to restore the Lagoon.

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Preservation of Agriculture	
GOAL 11: The City recognizes the important contribution of agricultural and horticultural land uses in the local economy and the emphasis of the need to maintain these activities.	*Potentially inconsistent – Highway/Rail.* The proposed improvements within Encinitas would, for the most part, result in encroachment and edge impacts along the existing corridors to agricultural land. Appropriate mitigation measures would be implemented where new development may potentially adversely impact agricultural resources which would financially and operationally compromise the affected agricultural areas or financially or operationally impair adjacent agricultural operations.
POLICY 11.8: Preserve and promote the right to produce unique horticultural crops and community gardens in Encinitas.	*Potentially inconsistent - Highway.* Highway improvements would result in minor encroachment onto adjacent agricultural properties. The project would affect approximately 18.5 acres of Prime Farmland in the City, potentially affecting the viability of agricultural activities on the unaffected portion of the property. In addition, the western edge of greenhouse and nursery facilities on two Unique Farmland parcels would be impacted by the roadway widening, however, the encroachments would not preclude agricultural activities on the remainder of the parcels. *Potentially consistent - Rail.* Specific rail improvements adjacent to agricultural properties and potential impacts are unknown but impacts are not anticipated. Site-specific studies identifying the potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
GOAL 12: The City will encourage the preservation of "prime" agriculture lands within its sphere of influence. (Coastal Act/30241)	*Potentially inconsistent - Highway.* See discussion for Policy 11.8 above. *N/A - Rail.* The rail improvements would not impact Prime Farmland.
POLICY 12.1: For the purpose of this plan and the LCP, "prime" agriculture is defined as land in the sphere of influence of the City of Encinitas Coastal Zone presently producing or with the future potential for commercial production of agricultural products and with a soil classification of Class I- IV. (Coastal Act/30241)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements would not affect the City's definition of "prime" agriculture.
POLICY 12.2: No "prime" agriculture lands are located within the City of Encinitas Coastal Zone. However, the Ecke Holdings, et. al., are within the City of Encinitas' Coastal Zone sphere of influence, and may, therefore, be influenced by the City's LCP and General Plan policies. The City recognizes this	*Potentially inconsistent – Highway.* See discussion under Goal 13, above.

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land as "prime" agriculture suitability and as such, designates it for long term preservation as "Agriculture/Open Space Preserve." (Coastal Act/30241)	*N/A - Rail.* The rail improvements would not impact Prime Farmland.
Land Use Policy and Resource Management	
GOAL 13: Create a desirable, healthful, and comfortable environment for living while preserving Encinitas' unique natural resources by encouraging land use policies that will preserve the environment. (Coastal Act/30250/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP transportation improvements are designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facilities. As such, the TREP/PWP is designed to minimize impacts to adjacent land uses, and to take advantage of new opportunities to enhance land uses by creating and improving facilities for pedestrian and bicycle use and habitat restoration.
POLICY 13.1: The City shall plan for types and patterns of development which minimize water pollution, air pollution, fire hazard, soil erosion, silting, slide damage, flooding and severe hillside cutting and scarring. (Coastal Act/30250)	*Potentially consistent – Highway/Rail.* See additional policy analysis under Resource Management section above. The proposed TREP/PWP is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor. The TREP/PWP would potentially improve water and air quality in the corridor and is designed to minimize potential hazards.
POLICY 13.2: The City shall plan for compatible land uses within and adjacent to recreation areas, natural preserves, and agricultural areas. (Coastal Act/30240/30250)	*Potentially consistent – Highway/Rail.* See discussion under Goal 13, above. The proposed TREP/PWP improvements would facilitate continued land use compatibility with adjacent uses.
POLICY 13.3: Encourage the use of buffer zones to separate major thoroughfares from adjacent areas and protect them from pollutants of noise, exhaust, and light. (Coastal Act/30250/30251)	*Potentially consistent – Highway/Rail.* The project would include landscaped buffer areas and soundwalls, where necessary, to protect adjacent areas from potential noise, exhaust and light pollution.
POLICY 13.4: Minimize visual pollution by establishing design review standards. (Coastal Act/30251/30253 (5))	*Potentially consistent - Highway.* The TREP/PWP include enhancement measures to minimize impacts to natural features and visual resources through use of architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, and including various methods of landscape

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	screening of facility improvements. In addition, the project also includes opportunities to underground existing utilities where feasible reducing urbanized landscape/features where possible, and opportunities for creating new community pocket parks or public open space areas, thereby enhancing visual resources where feasible. *Potentially consistent - Rail.* The TREP/PWP includes design and development strategies to address potential visual resource and aesthetics impacts, which would be further evaluated during project-level analyses for new, above-grade rail improvements pursuant to future environmental and/or phased federal consistency review, when applicable.
POLICY 13.5: The City shall promote and require the conservation and preservation of natural resources and features of the area in their natural state and avoid the creation of a totally urbanized landscape. Encourage the planting of trees and other vegetation, especially native species, to enhance the environment. (Coastal Act/30240/30251)	*Potentially consistent – Highway/Rail.* See discussion above.
POLICY 13.6: Establish and preserve wildlife corridors. (Coastal Act/30231/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP would not result in significant adverse impacts to wildlife corridors and includes opportunities to preserve and restore sensitive habitat areas and thereby would potentially benefit wildlife corridors.
Environmental Impacts for New Development	
GOAL 14: The City shall stringently control erosion and sedimentation from land use and development to avoid environmental degradation of lagoons and other sensitive biological habitat, preserve public resources and avoid the costs of dealing with repair and sedimentation removal. (Coastal Act/30231/30240/30250/30253)	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation of BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. These measures would reduce potential impacts associated with erosion and sedimentation.
POLICY 14.1: The best strategy to reduce erosion and sedimentation is to reduce to the maximum extent feasible, grading and removal of vegetation. It is the policy of the City that, in any land use and development, grading and vegetation removal shall be limited to the minimum necessary. (Coastal Act/30240/30250)	*Potentially consistent - Highway.* The highway improvements have been designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility and thereby minimize project grading

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	and vegetation removal. *Potentially consistent – Rail.* The rail improvements would occur in existing right-of-way. Site-specific grading and landscaping/ restoration plans would be prepared prior to development to ensure project grading and vegetation removal is reduced to the maximum extent feasible.
POLICY 14.2: The City shall develop a comprehensive program to control sedimentation and erosion. (Coastal Act/30233/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP would facilitate this policy by implementing project and site-specific BMPs to address potential water quality impacts during the construction and operational phases of the project.
POLICY 14.3: The City will reduce the rate of sedimentation of the lagoons by requiring procedures for controlling runoff and erosion associated with upland grading and development based on a minimum 10-year, six-hour storm event. The City shall provide regulations for the use of sedimentation basins and the potential transfer of sediment as beach replenishment (if of an acceptable material). (Coastal Act/30250/30251)	*Potentially consistent – Highway/Rail.* Additional site-specific study would be completed prior to development to determine consistency with the standards of this policy; however, the intent of the policy would be met by implementing BMPs to address potential water quality impacts during the construction and operational phases of the project.
POLICY 14.4: Revegetation and appropriate landscaping of all areas graded and scraped of vegetative cover shall be required with land use and development. Plantings, hydroseeding, and irrigation systems used shall be selected on the bases of minimizing erosion and conserving water. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP transportation improvements would include landscaping measures to minimize the potential for erosion from grading and vegetation removal pursuant to the standards of this policy.
POLICY 14.5: To minimize erosion and allow sedimentation control systems to work, no grading or vegetation removal shall be allowed to occur during the wet season, October 1 - April 15, without all systems and devices per an approved erosion control plan and program being in place. During other times of the year such systems shall be provided and operative as required by a comprehensive City erosion control ordinance. No grading shall occur during the rainy season within the special Study Overlay area, or in areas upland of sensitive areas including lagoons, floodplains, riparian or wetland habitat areas, unless by site-specific determination, the grading would not be occurring on sensitive slopes, in floodplain areas or upland of floodplains, where sedimentation might occur in other sensitive habitat areas. Then, if grading is determined to be allowable, all necessary erosion control devices, including sedimentation basins, must be in place, and shall be monitored and maintained throughout the grading period. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP includes grading, drainage and landscaping measures to minimize the potential for erosion pursuant to the standards of this policy. See also discussions within Resource Management policies, above.
POLICY 14.6: To achieve the ends of erosion control, a comprehensive erosion control plan shall be required with final building permit and improvement plans, subject to review and approval prior to commencement of grading and construction. (Coastal Act/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP transportation improvements include BMPs to address potential water quality impacts during all phases of the project. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. These measures would reduce potential

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	impacts associated with erosion and sedimentation.
Energy Conservation	
POLICY 15.1: The City will encourage the use of alternate energy systems, including passive solar and architectural and mechanical systems, in both commercial and residential development. (Coastal Act/30253)	*N/A – Highway/Rail.* The proposed TREP/PWP does not include commercial or residential development.
RECREATION	
GOAL 1: The maintenance of the open space resources in the Planning Area will continue to be emphasized. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* The proposed transportation improvements will result in minor development encroachment into open space resource areas; however, the proposed TREP/PWP is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas in the I-5 and LOSSAN rail corridors. Consistent with this policy, the project is designed to take advantage of new opportunities to enhance these areas for the public's use by providing new recreational and open space opportunities (trails, etc) and to avoid, to the maximum extent feasible, open space resources in the City.
POLICY 1.1: Continue to cooperate with property owners, the County of San Diego, and others to preserve and maintain the riparian habitats within the planning area. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* As discussed under Resource Management policies, above the project includes restoration of riparian habitat areas within City waterways potentially affected by the project.
POLICY 1.4: Establish a balance of natural open space and "improved" recreational open space and implement measures to preserve, and maintain the natural environment. (Coastal Act/30252)	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements have been designed to minimize the amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facilities, and to avoid, to the maximum extent feasible, open space resources in the City. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space where feasible. The TREP/PWP also includes a number of recreational trail and bicycle improvements that would be located and constructed consistent with the City's Resource Management Element.
POLICY 1.16: The City has adopted a City-wide Recreational Trails Master Plan to establish a recreational trails system. The proposed trail system is shown on the Recreational Trails Master Plan Map (Figure 3). Future trails, in addition to those planned for in the Recreational Trails Master Plan, may be added to the existing systems to enhance the recreational opportunities of the City. Within the coastal zone, all proposed trails and trail alignments shall be consistent with the requirements of Policy 10.5 of	*Potentially consistent – Highway/Rail.* The TREP/PWP includes a number of recreational trail improvements intended to facilitate and compliment the City's trail plans. Proposed trail location and construction would be implemented consistent with the City's Resource Management Element.

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the Resource Management Element, and the Multiple Habitat Conservation Program (MHCP) subarea plan for the City of Encinitas, if adopted. Any proposed modifications or additions to the Recreational Trails Master Plan or Recreational Trails Master Plan map that would directly affect coastal zone resources shall require an LCP amendment.	
GOAL 2: The City will make every effort to preserve open space areas that represent a significant environmental resource in the community. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* See discussion under Goal 1, above.
POLICY 2.1: The City should identify and seek to acquire floodplain areas for appropriate public uses. (Coastal Act/30212.5/30231/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP includes public recreational amenities such as trails within appropriate floodplain areas affected by the project to facilitate public access from inland to coastal areas of the City.
POLICY 2.2: Provide and maintain an inter-linking network of trails for horseback riding, hiking, and bicycling; and minimize the cost of the trail system by encouraging the use of drainage channels, flood plains, existing trails, public lands, excess street rights-of-way, and major utility rights-of-way. (Coastal Act/30212.5/30252)	*Potentially consistent – Highway/Rail.* The project includes various trail and bicycle improvements at reconfigured interchanges, grade separations, overpasses, and underpasses (some located in floodplain areas and public right-of-ways) that would greatly enhance pedestrian and bicycle circulation opportunities from inland areas bisected by the I-5 and LOSSAN rail corridors to the coast.
POLICY 2.3: Encourage the preservation and protection of areas for the recreational activities characteristic of Encinitas such as horseback riding, surfing, skindiving, bicycling, walking, and jogging. (Coastal Act/30212.5/30252)	*Potentially consistent – Highway/Rail.* The TREP/PWP includes trail and bicycle improvements to enhance pedestrian and bicycle circulation opportunities to significant coastal resource areas, such as San Elijo and Batiquitos lagoons and the coast. See also discussions under Recreation policies, above.
POLICY 2.4: Leave appropriate areas of neighborhood and community parks in a natural state, retaining natural topography and vegetation where preservation is feasible. (Coastal Act/30240)	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements have been designed to minimize the amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the proposed facilities, and to avoid, to the maximum extent feasible, open space resources' natural topography and vegetation. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at where feasible.
POLICY 2.5: Provide for early acquisition of park sites to insure proper location, adequate size, and lower costs through development of a program that identifies future park needs and possible future sites. (Coastal Act/30212.5)	*Potentially consistent – Highway/Rail.* See discussions under Recreation policies, above.
POLICY 2.6: Encourage the provision of a full range of recreational facilities distributed throughout the area. (Coastal Act/30212.5)	*Potentially consistent – Highway/Rail.* The TREP/PWP includes bicycle and pedestrian improvements to facilities and routes that connect with public transit centers, link neighborhoods and connect inland and coastal areas.

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POLICY 2.7: Encourage the use of appropriate public lands and facilities for park and recreation purposes to the maximum extent feasible consistent with the maintenance of natural resources. (Coastal Act/30212.5)	*Potentially consistent – Highway/Rail.* The project includes various trail and bicycle improvements at reconfigured interchanges, grade separations, overpasses, and underpasses (some located in floodplain areas and public right-of-ways) that would enhance pedestrian and bicycle circulation opportunities to significant coastal resource areas, such as San Elijo and Batiquitos lagoons and the coast.
POLICY 2.8: Encourage the maintenance of the bluffs, beach, shoreline, reefs and ocean and discourage any use that would adversely affect the beach and bluffs except a reasonable number of access public stairways, lifeguard towers, and similar public beach facilities. (Coastal Act/30211/30213)	*N/A – Highway/Rail.* The TREP/PWP does not involve improvements that would adversely affect maintenance of beach or bluff areas.
POLICY 2.9: The City will encourage the maintenance of existing overnight camping facilities (both tent and RV) at public beaches or upland from beaches. (Coastal Act/30213)	*N/A – Highway/Rail.* The TREP/PWP does not involve improvements that would adversely affect maintenance of overnight camping facilities.
GOAL 3: The Coastal Areas will continue to play a dominant role in providing residents with open spaces for recreation. (Coastal Act/30220)	*Potentially consistent – Highway/Rail.* The TREP/PWP has been designed so as to affect the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the proposed facilities, and to avoid, to the maximum extent feasible, impacts to open space resources. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space where feasible. The project will also facilitate access to coastal recreational areas via improvements for a multi-modal transit system.
POLICY 3.1: The City shall continue to support the acquisition and improvement through outright purchase, private donations, establishment of tax benefits, living trusts, etc., of additional local park sites. (Coastal Act/30212.5/30221)	*Potentially consistent - Highway.* The TREP/PWP includes provisions such that parcels, in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, thereby enhancing local park site opportunities where feasible. *Potentially consistent - Rail.* The rail improvements would be located generally in existing right-of-way and designed to avoid, to the maximum extent feasible, acquisition of additional lands. Completion of improvements would also provide enhanced public access to the coast.
POLICY 3.3: The City will not provide for major boating facilities, such as marinas or piers for commercial fishing and recreational boating, within the City Coastal Zone. No recreational water craft	*N/A – Highway/Rail.* The TREP/PWP does not involve construction or improvements to major boating facilities.

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facilities will be permitted in wetland areas. (Coastal Act/30231)	
POLCIY 3.4: The City will investigate various remedies to stem sand depletion along beaches in the City limits.	*N/A – Highway/Rail.* The TREP/PWP does not involve construction or improvements that would significantly affect sand depletion along beaches.
POLICY 4.4: The City will work to establish and protect a marine reserve within the coastal waters. (Coastal Act/30230)	*N/A – Highway/Rail.* The TREP/PWP does not involve construction or improvements that would significantly affect the City's ability to establish and protect a marine reserve within the coastal waters.
GOAL 5: The City will continue to provide or coordinate with the State to provide for coastal/shoreline recreation areas, with effective access, including signing; and will designate various beach areas for high, medium and low intensity levels of use based upon the characteristics of the beach resource and support facilities, and character of adjacent neighborhood. (Coastal Act/30211/30212/30212.5/30214)	*N/A – Highway/Rail.* The TREP/PWP does not involve construction or improvements that would significantly affect the intensity of use at beach sites; however, overall beach access would be improved given the various transportation improvements included in the project.
POLICY 5.1: The City recognizes Cardiff Beach State Park, San Elijo Beach State Park, South Carlsbad Beach State Park and Moonlight Beach (future City) State Park, as the major visitor destination beaches in the Encinitas area. The City will work with the State to upgrade and promote access to these State beaches, and will act to upgrade and promote access to Moonlight Beach, in order that they may receive an increased proportion of visitor uses. (Coastal Act/30214)	*Potentially consistent – Highway/Rail.* The TREP/PWP would improve public access to these beach areas through implementation of the various transportation improvements included in the project. The TREP/PWP's main purpose is to maintain or improve the existing and future multi-modal transportation needs and operations in the I-5 highway corridor and LOSSAN rail corridor in order to improve the safe and efficient regional movement of people and goods for current and future users. The proposed TREP/PWP would improve the transportation corridors while protecting and enhancing community character with sensitive design and community enhancement features.
POLICY 5.2: The City shall act and coordinate with the State to implement an effective system of shoreline access signing based on uniform standards (i.e., size, material, symbols). (Coastal Act/30212.5)	*Potentially consistent – Highway.* Any new signage along the I-5 corridor would be consistent with standard Caltrans design, which is and would be consistent throughout the corridor. *Potentially consistent – Rail.* It is unknown if proposed rail improvements would require new or additional signage for public access, safety or other purposes. Sign plans would be prepared prior to site-specific development to ensure uniform standards are met.
POLICY 5.3: The areas of South Carlsbad Beach State Park, Moonlight Beach State (future City) Park, Cardiff Beach State Park and San Elijo Beach State Park shall be designated as high intensity beach recreational use areas. (Coastal Act/30212.5/30221)	*N/A – Highway/Rail.* The TREP/PWP does not involve construction or improvements that would significantly affect the intensity of use at beach sites; however, overall beach access would be improved given the various transportation improvements included in the project.
POLICY 5.4: The City will classify the beach areas related to the following access points for a Medium	*N/A – Highway/Rail.* The TREP/PWP does not involve

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Intensity use level: - Beacons - Grandview - Swami's Park - D Street (access to Moonlight Beach) And the City will classify the beach areas related to the following access points for a Low Intensity use level: - North Sea Bluff Village (no current access) - Encinitas Beach (Athena - no current access) - "I" Street Vicinity (Vista Point) - Stone Steps access (Coastal Act/30212.5)	construction or improvements that would significantly affect the intensity of use at beach sites; however, overall beach access would be improved given the various transportation improvements included in the project.
POLICY 5.5: The City will adopt beach recreation facility standards, and will encourage the State to apply similar standards to its beaches, regarding the existence of lifeguard facilities, restroom facilities, showers, water fountains, parking facilities (and a number of spaces for different level uses), fee access, trash facilities, beach maintenance schedules, signing, picnic facilities, bicycle facilities, security patrol, etc. In addition, the City shall assure that existing public parking lots for public beach access points are maintained and that no reduction in the number of existing public parking spaces shall be permitted. (Coastal Act/30212.5/ 30223) Policy 5.5 amended 5/11/95 (Reso. 95-32)	*N/A – Highway/Rail.* The TREP/PWP does not involve construction or improvements that would significantly affect beach recreation facility standards.
PARK AND RECREATION PLAN	
<u>Beach Access/Vista Points</u> Policies in the Resource Management Element indicate sites for future access and Vista Points as well as existing facilities that will be maintained and improved. The following Vista Points, some of which have already been acquired, will be developed, as feasible: • San Elijo & Kilkenny (overlooking lagoon & coast) • Highway 101, north of La Costa Avenue • Northeast corner of I-5 and La Costa Avenue • Encinitas View Point Neighborhood Park site • South end of Via Tiempo • Orpheus Street Park site • Oak Crest Park site • West end of "D" Street • West end of "F" Street • West end of "J" Street (Coastal Act/30212/30251)	*Potentially consistent – Highway/Rail.* The TREP/PWP would have no significant adverse impacts on these Vista Points. See also discussion of Resource Management policies regarding Community Views, Vistas, and Aesthetic Qualities, above.

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The following Vista Points will be maintained as needed, and upgraded as necessary: • Leucadia Beach State Park • Moonlight Beach State Park (future City Park) • Swami's Park • Existing Vista Point on southbound I-5 between Birmingham and Manchester exits • Cardiff Beach State Park (south parking lot) • West end of "H" Street • West end of "I" Street (Coastal Act/30212/30251)	
Development of a Trail System A number of policies included in both this element and the Circulation Element are concerned with the development of a City-wide system of hiking, biking, and equestrian trails in the City. The Recreational Trails Master Plan will provide the planning guidance for the development of a City-wide recreational trails system. The Recreational Trails Master Plan addresses hiking, biking, and equestrian trails and includes a detailed trails map (Figure 3), trail standards and an implementation and maintenance plan.	*Potentially consistent – Highway/Rail.* The TREP/PWP includes recreational trail improvements intended to facilitate and compliment the City's trail plans. Proposed trail location and construction would be implemented consistent with the City's Resource Management Element.

4. City of Carlsbad

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MELLO I SEGMENT	
STANDARD PACIFIC (Aviara)	
Policy 3 - Drainage, Erosion Control a. All development must include mitigation measures for the control of urban runoff flow rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinance, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the additional requirements contained herein. The SUSMP, dated April 2003 and as amended, and the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdiction Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP. Such mitigation shall become an element of the project and shall be installed prior to the initial grading. At a minimum, such mitigation shall require construction of all improvements shown in the Master Drainage Plan between the project site and the lagoon (including the debris basin), revegetation of all graded areas immediately after grading, and mechanism for permanent maintenance if the City declines to accept the responsibility. Construction of drainage improvements may be through formation of an assessment district or through any similar arrangement that allots costs among the various landowners in an equitable manner. b. Prior to making land use decisions, the City shall utilize methods available to estimate increases in pollutant loads and flows resulting from proposed future development. The City shall require developments to incorporate structural and non-structural best management practices (BMPs) to mitigate the projected increases to pollutant loads and minimize any increases in peak runoff rate. c. Water pollution prevention methods shall be implemented to the maximum extent practicable, and supplemented by pollutant source controls and treatment. Small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into a municipal separate storm sewer system (MS4) shall be utilized. d. Post-development runoff from a site shall not contain pollutant loads which cause or contribute to an exceedance of receiving water quality objectives or which have not been reduced to the maximum extent practicable. e. Development projects should be designed to comply with the following site design principals: 1) Protect slopes and channels to decrease the potential for slopes and/or channels from eroding and impacting storm water runoff. 2) To the extent practicable, cluster development on the least environmentally sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.	*Potentially inconsistent - Highway.* The proposed TREP/PWP would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The highway improvements would include Best Management Practices (BMPs) to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/ minimized through the use of Construction site BMPs while the long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. Additional analysis is necessary to determine if the highway improvements would be designed consistent with the specific development standards of this policy including design to meet, infiltrate, filter or treat the runoff produced from each storm event up to and including the 85th percentile 24-hour storm event. *N/A - Rail.* Rail improvements would not be located within this plan area.

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3) Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands and buffer zones. Land acquisition of such areas shall be encouraged. 4) Provide development-free buffer zones for natural water bodies. 5) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment. 6) Where feasible implement site design/landscape features to slow runoff and maximize on-site infiltration of runoff. 7) Properly design outdoor material storage areas (including the use of roof or awning covers) to minimize the opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids and other pollutants from entering the storm water conveyance system. 8) Incorporate roof or awning covers over trash storage areas to prevent off-site transport of trash and other pollutants from entering the storm water conveyance system. 9) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways and bridges. 10) Design streets and circulation systems to reduce pollutants associated with vehicles and traffic resulting from development. f. Priority projects identified in the SUSMP will incorporate structural BMPs and submit a Water Quality Technical Report as specified in the NPDES permit and in the SUSMP. g. Structural BMPs used to meet SUSMP requirements for priority projects shall be based on the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice (BMP) Handbook, dated January 2003 or the current version of the publication, and designed to meet, infiltrate, filter or treat the runoff produced from each storm event up to and including the 85th percentile 24-hour storm event. h. Priority projects will include projects increasing impervious area by more than 2,500 square feet or by more than 10% of existing impervious area, that are in, adjacent to or drain directly to Environmentally Sensitive Areas (ESA), identified in the City of Carlsbad Standard Urban Storm Water Mitigation Plan (SUSMP) dated April 2003, using the definitions of "adjacent to" and "draining directly to" that are found in the SUSMP. i. The City shall include requirements in all coastal development permit approvals to inspect and maintain required BMPs for the life of the project.	

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j. The City will encourage and support public outreach and education regarding the potential water quality impacts of development. k. Development shall minimize land disturbance activities during construction (e.g., clearing, grading and cut-and-fill), especially in erosive areas (including steep slopes, unstable areas and erosive soils), to minimize impacts on water quality of excessive erosion and sedimentation. Development shall incorporate soil stabilization BMPs on disturbed areas as soon as feasible. l. Projects within 200 feet of the Pacific Ocean shall be dealt with as "Project Discharging to Receiving Water within Environmentally Sensitive Areas" as defined in Appendix I of the SUSMP, including being treated as a priority project if they create more than 2,500 square feet of impermeable surface or increase the impermeable surface on the property by more than 10%. m. Although residential developments of less than 10 units, including single family residences, are generally exempt from the SUSMP priority project requirements, they shall meet those requirements, including achievement of the numerical sizing standard, if they are in, within 200 feet of, or discharging directly to an ESA, including the Pacific Ocean; or shall provide a written report signed by a licensed civil engineer showing that as the project is designed they are mitigating polluted runoff, including dry weather nuisance flows, to the maximum extent practicable. n. Detached residential homes shall be required to use efficient irrigation systems and landscape designs or other methods to minimize or eliminate dry weather flow, if they are within 200 feet of an ESA, coastal bluffs or rocky intertidal areas. o. The following minor revisions may occur to the Carlsbad SUSMP Storm Water Standards dated April 2003 without an LCP amendment: 1) Addition of new Best Management Practices (BMPs) found to be more protective of water quality than current BMPs or removal of BMPs found to be ineffective. (This does not include removal of BMPs or categories of BMPs on the basis that the City finds them to be infeasible or impracticable). 2) Addition of new development categories as Priority Projects. 3) Addition of new coastal waters to the map of Environmentally Sensitive Areas. 4) Reductions in the area of impervious surfaces used to designate a specific category of Priority Project. p. Any minor changes made pursuant to the above list shall be accompanied by a finding that the changes will improve and better protect coastal water quality. The City Engineer or Planning Director shall notify the Executive Director in	

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writing of any of the above listed changes. For any changes not included in the above list, the City shall contact the Executive Director to determine whether an LCP amendment is necessary, and if necessary, shall subsequently apply for an LCP amendment for the changes.	
Policy 5 - Environmental Impact Report Biological and cultural resources on the site shall be identified, and any adverse impacts associated with development mitigated, through a site specific environmental impact report (EIR). Proposed mitigation shall be incorporated in the project design.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which identifies biological and cultural resources potentially impacted by the project and mitigation for adverse impacts. *N/A – Rail*. Rail improvements would not be located in this plan area.
OCCIDENTAL LAND, INC.	
Policy 2 - Drainage, Erosion Control *See STANDARD PACIFIC (Aviara) - Policy 3 - Drainage, Erosion Control above.*	*Potentially inconsistent – Highway.* See discussion under Standard Pacific (Aviara), Policy 3 above. *N/A – Rail.* Rail improvements would not be located in this plan area.
Policy 4 - Environmental Impact Report In the event of commercial and/or residential development pursuant of a coastal development permit, biological and cultural resources on the site shall be identified, and any adverse impacts associated with development mitigated, through a site specific environmental impact report (EIR). Proposed mitigation shall be incorporated in the project design.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which indentifies biological and cultural resources potentially impacted by the project and mitigation for adverse impacts. *N/A – Rail*. Rail improvements would not be located in this plan area.
RANCHO LA COSTA (HUNT PROPERTY)	
Policy 2 - Not Used (1) Development of the property may occur only under the provisions of Master Plan, and shall be subject to the requirements of Policy 2 "Agriculture/Planned Development." (2) The land uses allowed by the Master Plan shall be compatible with the City of Carlsbad General Plan as amended1 to provide a combination of residential, commercial (including visitor serving) and open space uses. (3) Residential density permitted through the Master Plan shall not exceed that allowed by the City of Carlsbad General Plan2.	*Potentially consistent - Highway.* The proposed project will not include development of a Master Plan, which is inapplicable to the proposed public facility improvements. In addition, the project would be compatible with the protection of sensitive resources and would not result in significant impacts to agricultural resources within this segment of the Carlsbad LCP. *N/A – Rail*. Rail improvements would not be located in this plan area.

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(4) All land uses and intensity of use shall be compatible with the protection of sensitive coastal resources. (5) Land use intensity shall be consistent with that allowed by the Carlsbad Growth Management Ordinance (Chapter 21.90, Carlsbad Municipal Code)3. The property shall be developed using the existing planned community zone with the additional requirements contained in the policies herein. All developments as defined by the Coastal Act require a coastal development permit and master plan that is consistent with the Carlsbad General Plan. Conversion of any portion of these non-prime agricultural lands as shown on the PRC Toups maps (See Exhibit 3.3, Page 26) to urban uses pursuant to the master plan shall be allowed if the following findings are made: (1a) Conversion would preserve prime agricultural land or concentrate development consistent with Section 30250 of the Public Resources Code; or, (1b) Continued or renewed agriculture is no longer feasible; or (1c) Payment of an agricultural conversion mitigation fee in an amount not less than $5,000 and not more than $10,000 per net converted acre has been made; and (2) Conversion would be compatible with continued agricultural use on surrounding lands; (3) The master plan provides overriding benefits to the resources of Batiquitos Lagoon; (4) The master plan provides significant protection and enhancement of environmentally sensitive habitats above and beyond the existing land use control's current requirements. The amount of agricultural conversion mitigation fee shall be determined by the City Council at the time it considers a development permit for conversion of the property to urban uses and shall reflect the per acre cost of preserving prime agricultural land pursuant to paragraph 1a. The fee shall be deposited in the State Coastal Conservancy Fund and shall be expended in the following order of priority: (1) Restoration of natural resources and wildlife habitat in Batiquitos Lagoon, including but not limited to payment for operation and maintenance of a Lagoon enhancement program. (2) Development of an interpretive center at Buena Vista Lagoon. (3) Restoration of beaches managed for public use in the City of Carlsbad. (4) Purchase of agricultural lands for continued agricultural production within the Carlsbad Coastal Zone as	

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determined by the Carlsbad City Council. (5) Agricultural improvements which will aid in the continuation of remaining agricultural production within the Carlsbad Coastal Zone as determined by the Carlsbad City Council.	
Policy 3 - Drainage and Erosion Control Under the P-C Zone requirements and the development intensities established in Policy 1 -Maximum Density of Development, the development shall conform to the following additional development standards: Any development proposal that affects steep slopes (25% inclination or greater) shall be required to prepare a slope map and analysis for the affected slopes. Steep slopes are identified on the PRC Toups maps. The slope mapping and analysis shall be prepared during the CEQA environmental review on a project-by-project basis and shall be required as a condition of a coastal development permit. (1) For those slopes mapped as possessing endangered plant/animal species and/or Coastal Sage Scrub and Chaparral plant communities, the following policy language would apply: (a) Slopes of 25% grade and over shall be preserved in their natural state, unless the application of this policy would preclude any reasonable use of the property, in which case an encroachment not to exceed 10% of the steep slope area over 25% grade may be permitted. For existing legal parcels, with all or nearly all of their area in slope area over 25% grade, encroachment may be permitted; however, any such encroachment shall be limited so that at no time is more than 20% of the entire parcel (including areas under 25% slope) permitted to be disturbed from its natural state. This policy shall not apply to the construction of roads or the City's Circulation Element or the development of utility systems. Uses of slopes over 25% may be made in order to provide access to flatter areas if there is no less environmentally damaging alternative available. (b) No further subdivisions of land or utilization of Planned Unit Developments shall occur on lots that have their total area in excess of 25% slope unless a Planned Unit Development is proposed which limits grading and development to not more than 10% of the total site area. (c) Slopes and areas remaining undisturbed as a result of the hillside review process, shall be placed in a permanent open space easement as a condition of development approval. The purpose of the open space easement shall be to reduce the potential for localized erosion and slide hazards, to prohibit the removal of native vegetation except for creating firebreaks and/or planting fire retardant vegetation and to protect visual resources of importance to the entire community. (2) For all other steep slope areas, the City Council may allow exceptions to the above grading provisions provided the following mandatory findings to allow exceptions are made:	*Potentially inconsistent - Highway.* The TREP/PWP highway improvements involve construction on slopes exceeding 25%; however, this policy provides an exception for construction of roads or the City's Circulation Element or the development of utility systems. A draft EIR/EIS has been prepared for the I-5 NCC project and includes soils and geotechnical studies that document the project will not adversely affect hillside or soil stability. Additional analysis is necessary to determine if the project would be designed consistent with the specific development standards of this policy including design such that drainage and runoff shall be controlled so as not to exceed at any time the rate associated with property in its present state, and appropriate measures shall be taken on and/or offsite to prevent siltation of lagoons and other environmentally sensitive areas. *N/A – Rail*. Rail improvements would not be located in this plan area.

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(a) A soils investigation conducted by a licensed soils engineer has determined the subject slope area to be stable and grading and development impacts mitigatable for at least 75 years, or life of structure. (b) Grading of the slope is essential to the development intent and design. (c) Slope disturbance will not result in substantial damage or alteration to major wildlife habitat or native vegetation areas. (d) If the area proposed to be disturbed is predominated by steep slopes and is in excess of 10 acres, no more than one third of the total steep slope area shall be subject to major grade changes. (e) If the area proposed to be disturbed is predominated by steep slopes and is less than 10 acres, complete grading may be allowed only if no interruption of significant wildlife corridors occurs. (f) Because north-facing slopes are generally more prone to stability problems and many cases contain more extensive natural vegetation, no grading or removal of vegetation from these areas will be permitted unless all environmental impacts have been mitigated. Overriding circumstances are not considered adequate mitigation. (3) Drainage and runoff shall be controlled so as not to exceed at any time the rate associated with property in its present state, and appropriate measures shall be taken on and/or offsite to prevent siltation of lagoons and other environmentally sensitive areas. (4) The appropriate measures shall be installed prior to onsite grading. (5) All undevelopable slopes shall be placed in open space easements as a condition of development approval. (6) *See STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above.* (7) Mitigation measures tailored to project impacts and consistent with the control of cumulative development shall be implemented prior to development in accordance with the following additional criteria: (a) Submittal of a runoff control plan designed by a licensed engineer qualified in hydrology and hydraulics, which would assure no increase in peak runoff rate from the developed site over the greatest discharge expected from the existing undeveloped site as a result of a 10-year frequency storm. Runoff control shall be accomplished by a variety of measures, including, but not limited to, onsite catchment basins, detention basins, siltation traps and energy dissipaters and shall not be concentrated in one area or a few locations. (b) Detailed maintenance arrangements and various alternatives for providing the ongoing repair and maintenance	

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of any approved drainage and erosion control facilities. (c) All permanent runoff and erosion control devices shall be developed and installed prior to or concurrent with any onsite grading activities. (d) All areas disturbed by grading, but not completed during the construction period, including graded pads, shall be planted and stabilized prior to October 1st with temporary or permanent (in the case of finished slopes) erosion control measures and native vegetation. The use of temporary erosion control measures, such as berms, interceptor ditches, sandbagging, filtered inlets, debris basins and silt traps, shall be utilized in conjunction with plantings to minimize soil loss from the construction site. Said planting shall be accomplished under the supervision of a licensed landscaped architect and shall consist of seeding, mulching, fertilization and irrigation adequate to provide 90 percent coverage within 90 days. Planting shall be repeated, if the required level of coverage is not established. This requirement shall apply to all disturbed soils, including stockpiles.	
Policy 6 - Environmental Impact Report Biological and cultural resources on the site shall be identified, and any adverse impacts associated with development mitigated, through a site specific environmental impact report (EIR). Proposed mitigation shall be incorporated in the project design.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which identifies biological and cultural resources potentially impacted by the project and mitigation for adverse impacts. *N/A – Rail*. Rail improvements would not be located in this plan area.
Policy 7 – Protection of Sensitive Native Vegetation Areas The Carlsbad Habitat Management Plan (HMP) is a comprehensive, citywide program to identify how the city, in cooperation with federal and state agencies, can preserve the diversity of habitat and protect sensitive biological resources within the city and the Coastal zone. The HMP has been prepared as part of the San Diego County Multiple Habitat Conservation Program (MHCP). The MHCP will establish a coordinated habitat preserve system to protect listed species and rare native vegetation while accommodating regional development needs. The HMP provides a comprehensive plan for creation and management of proposed preserve areas in the coastal zone, along with appropriate criteria for development requirements and delineation of development/preservation boundaries. The creation of an effective habitat preserve requires a careful balancing of acquisition, preservation and mitigation requirements, as well as enforceable monitoring, remediation and an adequately funded maintenance program for the preserve area. Section 30240(a) of the Coastal Act establishes a specific mandate for resource preservation. It states, in part, "(e)nvironmentally sensitive habitat areas shall be protected against any significant disruption of habitat values…" Environmentally sensitive habitat area (ESHA) is defined in Section 30107.5 of the Coastal Act as "any area in which	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which identifies biological resources potentially impacted by the project and mitigation for adverse impacts. Segments of the proposed project would encroach into areas conserved for their wildlife value as part of the HMP preserve system. However, these encroachments would be small and would not affect the overall biological value of the preserve areas. The highway improvements and potential mitigation measures would be designed consistent with the goals and objectives of Carlsbad HMP and San Diego County MHCP as incorporated into the City's LCP. *N/A – Rail*. Rail improvements would not be located in this plan area.

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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. The regional nature of the habitat preservation effort sets the MHCP and HMP apart from other plans affecting ESHA, where the noncomprehensive nature of the plans and lack of regional resource protection standards require more stringent limitations to coastal ESHA impacts for individual sites. The clustering and concentration of development away from sensitive areas that will result from the proposed standards contained in the HMP and identified in the policies below will provide a larger, more contiguous preserve area than if development on the same properties were to be approved on a lot-by-lot basis.	
7-1.1 Habitat Management Plan The document titled "Habitat Management Plan for Natural Communities in the City of Carlsbad, December 1999 with Two Addenda" (hereafter referred to as HMP) is incorporated herein by reference. The Second Addendum dated December 2002 contains additional conservation standards and habitat protection policies that apply within the Coastal Zone. The HMP has been developed so as to implement and be consistent with all other provisions of this LCP, as amended. Any changes to the HMP that affect development within the coastal zone (including, but not limited to, changes to mitigation requirements) shall be certified by the Coastal Commission as LCP amendments prior to becoming effective.	*Potentially consistent - Highway.* See discussion under Policy 7, above. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.2 Environmentally Sensitive Habitat Areas (ESHA) Pursuant to Section 30240 of the California Coastal Act, environmentally sensitive habitat areas, as defined in Section 30107.5 of the Coastal Act, shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.	*Potentially inconsistent - Highway.* The I-5 NCC project would include road facility encroachments potentially resulting in direct impacts to ESHA associated with Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, and other areas along the corridor containing coastal sage scrub and southern willow scrub habitat. The proposed improvements are potentially inconsistent with the permitted uses identified in this Policy. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.3 Coastal Sage Scrub Coastal Sage Scrub is a resource of particular importance to the ecosystems of the Coastal Zone, due in part to the presence of the Coastal California gnatcatcher (Federal Threatened) and other species. Properties containing Costal Sage Scrub shall conserve a minimum 67% of the Coastal Sage Scrub and 75% of the gnatcatchers onsite. Conservation of gnatcatchers shall be determined in consultation with the wildlife agencies.	*Potentially inconsistent – Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which identifies the occurrence of coastal sage scrub habitat in the corridor. Facility encroachments would potentially result in direct impacts to coastal sage scrub habitat supporting gnatcatchers. Additional site-specific analysis of potential impacts to coastal sage scrub and gnatcatcher habitat is required to demonstrate consistency with this

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	policy, including whether the project improvements can be designed to preserve a minimum of 67% of the coastal sage scrub habitat and 75% of the gnatcatchers onsite. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.4 Oak Woodland An oak woodland is a closed to relatively open stand of trees within which a dominant tree species is a species of oak. In coastal southern California, that species is generally Coast Live Oak (Quercus agrifolia), which is commonly found on slopes and riparian situations. Shrubs vary from occasional to common and the herb layer is often continuous and dominated by a variety of annual grasses.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which identifies the occurrence of oak woodland habitat in the corridor. The project would not to oak woodland habitat. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.5 Streams A stream is a topographical feature with a clear bed and bank that periodically conveys water.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared the I-5 NCC project which identifies the occurrence of streams in the corridor and any potential for impacts or required mitigation measures. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.6 Ephemeral Drainages and Ephemeral Streams Ephemeral drainages and ephemeral streams are topographic features that convey water, but only during and shortly after rainfall events in a typical year.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared the I-5 NCC project which identifies the occurrence of ephemeral drainages and streams in the corridor and any potential for impacts or required mitigation measures. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.7 Wetlands Pursuant to California Public Resources Code Section 30121 and Title 14, California Code of Regulations Section 13577(b), 'wetland' means lands within the coastal zone, which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats and fens. Wetland shall include land where the water table is at, near or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of	*Potentially inconsistent - Highway.* The I-5 NCC project would result in minor development encroachments potentially resulting in direct impacts to coastal wetlands within the City. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging

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surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. A preponderance of hydric soils or a preponderance of wetland indicator species shall be considered presumptive evidence of wetland conditions. Wetlands shall be delineated following the definitions and boundary descriptions in Section 13577 of the California Code of Regulations. Pursuant to California Public Resources Code Section 30233, no impacts to wetlands shall be allowed except as provided in that Section.	alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.8 Wetland Mitigation Requirements If impacts to a wetland are allowed consistent with Policy 7-1.7, mitigation shall be provided at a ratio of 3:1 for riparian impacts and 4:1 for saltwater or freshwater wetland or marsh impacts.	*Potentially inconsistent - Highway.* The I-5 NCC improvements would result in minor facility encroachments potentially resulting in direct impacts to wetlands. Preliminary analysis for the project indicates that impacts to wetlands likely can not be mitigated in the City per an in-kind 4:1 mitigation ratio throughout the corridor as identified in this Policy. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.9 No Net Loss of Habitat There shall be no net loss of Coastal Sage Scrub, Maritime Succulent Scrub, Southern Maritime Chaparral, Southern Mixed Chaparral, Native Grassland and Oak Woodland within the Coastal Zone of Carlsbad. Mitigation for impacts to any of these habitat types, when permitted, shall include a creation component that achieves the no net loss standard. Substantial restoration of highly degraded areas (where effective functions of the habitat type have been lost) may be substituted for creation subject to the consultation and concurrence of the U.S. Fish and Wildlife Service and the California Department of Fish and Game (wildlife agencies). The Coastal Commission shall be notified and provided an opportunity to comment upon proposed substitutions of substantial restoration for the required creation component. Development shall be consistent with Policy 7-1.2 of this section, unless proposed impacts are specifically identified in the HMP; these impacts shall be located to minimize impacts to Coastal Sage Scrub and maximize protection of the Coastal California gnatcatcher and its habitat.	*Potentially inconsistent - Highway.* The I-5 NCC project would include facility encroachments potentially resulting in direct impacts to ESHA. The proposed transportation improvements are potentially not considered a resource dependent use as required by Policy 7-1.2. However, the proposed project is designed to preserve and minimize adverse impacts to significant environmental areas of the City to ESHA and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo

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	Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. However, the proposed restoration efforts may not result in a no net loss of sensitive upland habitat solely within the City boundaries. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.10 Upland Habitat Mitigation Requirements Where impacts to the habitants stated in 7-1.9 are allowed, mitigation shall be provided as follows: a. The no net loss standard shall be satisfied as stated in 7-1.9. Typically this will consist of creation of the habitat type being impacted (or substantial restoration where allowed) at a ratio of at least 1:1 as provided in the HMP. b. Onsite preservation is not eligible for mitigation credit in the coastal zone except as provided in subsection g. below. c. Impacts to Coastal Sage Scrub shall be mitigated at an overall ratio of 2:1, with the creation component satisfying half of the total obligation. The remainder of the mitigation obligation shall be satisfied pursuant to the provisions of the HMP. d. Impacts to Southern Maritime Chaparral or Maritime Succulent Scrub shall be mitigated at an overall ratio of 3:1, with the creation component satisfying one-third of the total obligation. The remainder of the mitigation obligation shall be satisfied pursuant to the provisions of the HMP. e. Impacts to Southern Mixed Chaparral, Native Grassland and Oak Woodland shall be mitigated respectively at ratios of 1:1, 3:1 and 3:1, with the creation component satisfying the obligation or one-third of the total obligation. The remainder of the mitigation obligation shall be satisfied pursuant to the provisions of the HMP. f. Mitigation for impacts within the coastal zone should be provided within the coastal zone if possible, particularly the 1:1 creation component, in order to have no net loss of habitat within the coastal zone. Mitigation measures on land outside the Coastal Zone may be acceptable if such mitigation would clearly result in higher levels of habitat protection and value and/or would provide significantly greater mitigation ratios and the mitigation area is part of the HMP. Land area inside and outside the coastal zone which serves as mitigation for habitat impacts in the coastal zone shall be permanently retired from development potential and secured as part of the HMP preserve management plan as a condition of development approval.	*Potentially inconsistent - Highway.* The highway improvements are potentially consistent with portions of this policy that allow for onsite or off-site open space preservation areas if the preserve areas are disturbed and suitable for restoration or enhancement, or if they are devoid of habitat value and therefore suitable for the 1:1 mitigation component requiring creation or substantial restoration of new habitat. Further, habitat creation or restoration requirements may be partially or wholly fulfilled by acquisition of existing like habitat and/or retirement of development credits on existing like habitat with permanent preservation as part of the HMP preserve management plan. The TREP/PWP provides a unique opportunity to meet these requirements through facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. However, the proposed restoration efforts may not result in a no net loss of sensitive upland habitat solely within the City boundaries. *N/A – Rail*. Rail improvements would not be located in this plan area.

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g. Onsite or off-site open space preserve areas may be utilized to satisfy required mitigation for habitat impacts associated with development if the preserve areas are disturbed and suitable for restoration or enhancement, or they are devoid of habitat value and therefore suitable for the 1:1 mitigation component requiring creation or substantial restoration of new habitat. Substantial restoration is restoration that has the effect of qualitatively changing habitat type and may meet the creation requirement if it restores habitat type that was historically present, but has suffered habitat conversion or such extreme degradation that most of the present dominant species are not part of the original vegetation. Substantial restoration contrasts with enhancement activities, which include weeding or planting within vegetation that retains its historical character, and restoration of disturbed areas to increase the value of existing habitat which may meet other mitigation requirements pursuant to the HMP. h. Habitat mitigation requirements other than the creation or substantial restoration component may be partially or wholly fulfilled by acquisition of existing like habitat and/or retirement of development credits on existing like habitat with permanent preservation as part of the HMP preserve management plan. i. All mitigation areas, onsite and offsite, shall be secured with a conservation easement in favor of the wildlife agencies. In addition, a preserve management plan shall be prepared for the mitigation areas, to the satisfaction of the City, the wildlife agencies and the Coastal Commission. The preserve management plan shall ensure adequate funding to protect the preserve as open space and to maintain the biological values of the mitigation areas in perpetuity. Management provisions and funding shall be in place prior to any impacts to habitat. At a minimum, monitoring reports shall be required as a condition of development approval after the first and third year of habitat mitigation efforts. The preserve management plan shall be incorporated into the Implementation Plan of the LCP through an LCP amendment within one year of Commission certification of the HMP as part of the certified LCP. j. If any conflict should arise between the Policies of the LCP and the provisions of the HMP, the LCP shall take precedence. If any conflict should arise between the policies of the certified Mello I LUP and the certified Implementation Plan the policies of the certified Mello I LUP shall take precedence.	
7-1.11 Highly Constrained Properties There are properties in the Coastal Zone that are entirely or almost entirely constrained by environmentally sensitive habitat area (ESHA). In these cases, one of the following additional standards shall apply: a. If more than 80% of the property by area is covered with ESHA at least 75% of the property shall be conserved, OR b. If the City, with the concurrences of the wildlife agencies and the Coastal Commission through an LCP amendment, approved a Hardline preserve boundary for any of the above-described properties as part of the HMP, then the amount of onsite preservation as identified in the Hardline boundary shall apply.	*Potentially inconsistent – Highway.* Additional City-specific analysis of potential ESHA impacts is required to determine consistency with this policy as it relates to either quantitative habitat preservation requirements or occurrence/amendment of Hardline preserve boundaries. For identified facility encroachments into ESHA, preservation of at least 75% of the habitat onsite may not be feasible for conservation, presenting a conflict with the requirements of this Policy.

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	N/A – Rail. Rail improvements would not be located in this plan area.
7-1.12 Buffers and Fuel Modification Zones Buffers shall be provided between all preserved habitat areas and development. Minimum buffer widths shall be provided as follows: a. 100 feet for wetlands b. 50 feet for riparian areas c. 20 feet for all other native habitats (coastal sage scrub, southern maritime chaparral, maritime succulent scrub, southern mixed chaparral, native grassland, oak woodland). Buffer widths shall be measured from the edge of preserved habitat nearest the development to the closest point of development. For wetlands and riparian areas possessing an unvegetated bank or steep slope (greater than 25%), the buffer shall be measured from the top of the bank or steep slope rather than the edge of habitat, unless there is at least 50 feet between the riparian or wetland area and the toe of the slope. If the toe of the slope is less than 50 feet from the wetland or riparian area, the buffer shall be measured from the top of the slope. Any proposed reductions in buffer widths for a specific site shall require sufficient information to determine that a buffer of lesser width will protect the identified resources. Such information shall include, but is not limited to, the size and type of the development and/or proposed mitigation (such as planting of vegetation or the construction of fencing) that will also achieve the purposes of the buffer. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the Coastal Commission staff shall be consulted in such buffer determinations. No development, grading or alterations, including clearing of vegetation, shall occur in the buffer area, except for: a. Fuel modification Zone 3 to a maximum of 20 feet for upland and non-riparian habitat. No fuel modification shall take place within 50 feet of riparian areas, wetlands or oak woodland. b. Recreation trails and public pathways within the first 15 feet of the buffer closest to the development, provided that construction of the trail or pathway and its proposed use is consistent with the preservation goals for the adjacent habitat and that appropriate measures are taken for physical separation from sensitive areas. Buffer areas that do not contain native habitat shall be landscaped using native plants. Signage and physical barriers such as walls or fences shall be required to minimize edge effects of development.	*Potentially inconsistent - Highway.* Due to the current orientation of the highway, especially where it crosses coastal lagoon systems, the proposed improvements would occur in areas containing wetlands, riparian and sensitive habitats, and therefore, would not meet the standard minimum buffers recommended by this policy. Although this policy allows for reduced buffer widths on a site specific basis where it can be demonstrated that the project design with reduced buffer width will achieve the purposes of the buffer, it may be difficult to provide the buffer widths required in this policy without further impacting sensitive resources presently located adjacent to the freeway. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the Coastal Commission staff will be consulted in buffer determinations for the I-5 NCC project. *N/A – Rail*. Rail improvements would not be located in this plan area.

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7-1.13 Hardline Preserve Boundaries The purpose of the standards listed above is to ensure that the future development is sited to preserve the maximum amount of ESHA within the coastal zone, and to establish viable habitat corridors and preserve areas. If the City, with the concurrence of the wildlife agencies and the Coastal Commission through an LCP amendment subsequently approves a Hardline preserve boundary for any properties as part of the HMP, then the onsite preservation included in the Hardline preserve boundary shall apply.	*Potentially consistent - Highway.* A draft EIR/EIS has been prepared for the I-5 NCC project which identifies biological resources potentially impacted by the project and mitigation for adverse impacts. Segments of the proposed project would encroach into areas conserved for their wildlife value as part of the HMP preserve system. However, these encroachments would be small and would not affect the overall biological value of the preserve areas. The highway improvements and potential mitigation measures would be designed consistent with the goals and objectives of Carlsbad HMP and San Diego County MHCP as incorporated into the City's LCP. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.14 Steep Slope Encroachments The percentage of steep slope encroachment allowed by the drainage and erosion control policies may be modified for development consistent with the habitat protection policies listed above and approved as part of the adopted HMP.	*Potentially consistent - Highway.* The TREP/PWP improvements involve construction on slopes exceeding 25%; however, this policy provides an exception for construction of roads or the City's Circulation Element or the development of utility systems. A draft EIR/EIS has been prepared for the I-5 NCC project and includes soils and geotechnical studies that document the project will not adversely affect hillside or soil stability. *N/A – Rail*. Rail improvements would not be located in this plan area.
7-1.15 Invasive Plants The use of invasive plant species in the landscaping for developments such as those identified in Table 12 of the HMP shall be prohibited.	*Potentially consistent - Highway.* The TREP/PWP would include freeway landscaping utilizing noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted, and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist.

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	N/A – Rail. Rail improvements would not be located in this plan area.
FINDINGS The Commission hereby finds and declares as follows:	
(2) Environmentally Sensitive Habitat The PRC Toups Report identifies the Coastal Sage Scrub and mixed Chaparral found on the steeper slopes of the Rancho La Costa property as having significant habitat resource value. These areas exhibit a large number and diversity of both plant and animal species, several of which could be threatened because of conversion to urban or agricultural use. The Coastal Plan identifies Batiquitos Lagoon, as a resource of statewide significance and an environmentally sensitive habitat. All of the Standard Pacific and Rancho La Costa properties are located in the Batiquitos Lagoon Watershed. A portion of Occidental is so located. Batiquitos Lagoon is approximately 600 acres and provides habitat for more than 75 species of waterfowl and shore birds, including migratory shore birds which feed in the shallow ponds both west and east of the freeway. Batiquitos Lagoon is given priority protection under Section 30233(c) because it has been identified as a critical coastal wetland by the Department of Fish and Game. Sections 30230, 30231, 30233, 30236 and 30240 of the Coastal Act are applicable to environmentally sensitive habitat areas. Essentially all these provisions of the Coastal Act are concerned with the preservation and protection of environmentally sensitive habitat areas. Environmentally sensitive habitat areas are defined as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Coastal Act, Section 30107.5). Batiquitos Lagoon can be adversely impacted by development in a number of ways. Batiquitos Lagoon is directly affected by such things as erosion of the upland hill areas transporting sediment into the lagoon, and by excessive nutrient loads from agricultural land uses. The steep slopes which contain the coastal mixed Chaparral on the Rancho La Costa site will be degraded or destroyed by extensive grading activity. To protect Batiquitos Lagoon from increased sedimentation as a result of urbanization, PRC Toups recommended conformance to the draft Carlsbad Master Drainage Plan and restriction of construction on slopes in excess of 25%. The Carlsbad Master Drainage Plan proposes phased incremental construction of underground sewers along all of the drainage courses in the Mello I Bill LCP area. The Master Drainage Plan also proposes a new grading ordinance that provides controls over urban runoff, but does not contain any restrictions upon grading season. There are two problems with sedimentation that are of special concern to the Commission because of their effects on Batiquitos: increased sedimentation from the urban development process, and increased streambed erosion resulting from paving and storm drains in urbanized areas. Several publications note the dramatic increase in sediment production caused by urbanization, "Effects of Urbanization of Sedimentation and Flood flows in Colma Basin, California" by J. M. Knott USGS notes an increase in sedimentation to 130 times pre-development rates. Increases of 100-fold are also noted in Evaluation and Control of Soil Erosion in Urbanizing Watersheds by Chang-Ning Chen while even more dramatic increases are related in "Control of Sediments Resulting from Highway Construction and Land	*Potentially inconsistent – Highway.* See ESHA and wetlands discussions under Policy 7-1.2 and 7-1.7, respectively, above. The TREP/PWP improvements involve construction on slopes exceeding 25%; however, this policy provides an exception for construction of roads or the City's Circulation Element or the development of utility systems. The proposed TREP/PWP would minimize potential impacts to surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The highway improvements would include Best Management Practices (BMPs) to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/ minimized through the use of Construction site BMPs while the long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. However, additional analysis is necessary to determine if the highway improvements would be designed consistent with the specific development standards of the Carlsbad Master Drainage Plan *N/A – Rail*. Rail improvements would not be located in this plan area.

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Development" by the U.S. Environmental Protection Agency, 1971. The Commission has observed these effects throughout San Diego County, and finds that stringent controls over the timing of grading and policies to assure revegetation are necessary to minimize these increases. The policies of the certified LCP provide controls and policies analogous to those required by the Commission in its permit decisions. The second major problem with sedimentation, and the major long term concern, is increased flood flows due to urbanization. The Commission's own consultant, Karen Prestegard, in "Stream and Lagoon Channels of the Los Penasquitos Watershed, California, with an Evaluation of Possible Effects of Proposed Urbanization," reported that increased urban runoff can cause streambed erosion for periods of 20 to 30 years, and is the major cause of increased sediment deposition in San Diego County. The problems of streambed erosion have been dramatic in San Diego, notably at Crest and Luz Canyons, and also within the watershed of Batiquitos Lagoon in the formation of a canyon along Batiquitos Lane, and in the dramatic increases in deltas at the western and eastern end of the lagoon. The Commission finds that phased construction of storm drains is not sufficient to mitigate the effects of urbanization because unlined portions of drainageways continue to erode at an even more rapid rate after construction upstream. The Commission is also concerned that construction of artificial drainageways avoids the benefits of filtration of urban runoff accomplished through natural drainageways. Within the LCP area, there are two drainageways along the western edge of the property where urbanization has already caused serious erosion problems. Portions of Occidental Land and the entire Standard Pacific site drain into this area. In these two areas, natural drainageways are no longer practical. The PRC Toups Report recommended installation of artificial drains on an incremental basis (project by project). The Commission finds that such a recommendation would exacerbate the erosion and rejects that recommendation. Instead, the Commission has adopted policies that require construction of drainage facilities to resolve existing erosion problems prior to any further development. The policy language provides for use of an assessment district, or any similar method, so that all developers causing the erosion problem would contribute equitably to the solution. The Commission recognizes that this may place an additional burden on the initial developer, but notes that methods such as development agreements are in common use in San Diego County. The Commission also notes that installation of artificial drains are generally more economical than detention of storm water onsite. Finally, the immediate resolution of the existing erosion problem is strongly encouraged by the provision of Section 30231 that "productivity...shall be maintained and, where feasible, restored through controlling runoff. In the remainder of the LCP (principally the Rancho La Costa site) it is possible and of substantial benefit to the preservation of the lagoon to design a drainage system that maintains existing, natural drainageways. Therefore, LCP policies have been adopted which require controls preventing increased runoff to be included as an integral element of development. Although the approach outlined in these policies and in these findings relies heavily upon engineered facilities to reduce peak runoff, it must be recognized that there are limits to the effectiveness of such controls. Rancho La Costa is a series of steep canyons draining in a north-south direction into Batiquitos Lagoon. It contains highly erodible soils and is very susceptible to degradation. Further, because of the proximity of this area to the lagoon, and because it takes a period of up to five years for revegetation to reduce sedimentation below the levels of an undisturbed site, land use designations	

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must reflect the limitations of the land. Without such limits on overall development intensity, grading of the site could lead to massive siltation during and after initial grading, regardless of mitigation measures. The Commission cannot agree that the PRC Toups recommendation of an overall density of 0 to 4 units per acre provides for land uses reflecting the limitations of the land. Further, the PRC Toups recommendation to concentrate development off of slopes in excess of 25% do not articulate a compelling distinction for not restricting development on slopes between 10% and 25%. The information in the background reports indicates that virtually all of the land in this LCP over 10% slope (and some of the land under 10% slope) is identified within the LCP as having moderate to high, or very high erosion hazard by the Soil Conservation Service. Therefore, the Commission finds that it is necessary to provide land use policies that establish land use intensities reflecting the limitations of the natural terrain. The policies, approved in this staff recommendation recognize the relationship of development density to the natural carrying capacity of the land, only as so revised can the Commission find the Land Use Plan consistent with the habitat protection policies of the Coastal Act.	
(3) Hazard Areas The Mello Bill LCP indicates that geographical hazards can be grouped into two basic categories: (a) Landslides, slope instability, and soil erosion problems. (b) Seismic hazards. Section 30253 of the Coastal Act indicates that new development shall "minimize risks to life and property in areas of high geologic, flood, and fire hazard..." and "assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area..." In the technical background report on hazards, prepared by PRC Toups Corporation, landslide prone areas have been generally identified. None are within the Mello Bill LCP. However, much of the Mello Bill LCP contains properties designated as "accelerated erosion prone areas" which drain into Batiquitos Lagoon. Much of the Mello Bill LCP properties are designated by the U.S. Department of Agriculture Soil Conservation Service as having a high erosion hazard. Because of this, and the fact that Batiquitos Lagoon is an environmentally sensitive habitat area, the Commission finds that the additional erosion control policies are necessary. These policies require that development: • conform to the draft Carlsbad Master Drainage Plan; • limit time of year for grading to the dry season; • control increased runoff; • maintain drainage and erosion control facilities; • plant and stabilize graded areas; and	*Potentially consistent - Highway.* The TREP/PWP involves construction in areas potentially subject to geologic hazards; however, based on the draft EIR/EIS prepared for the I-5 NCC project, the soils and geotechnical studies document the project would not adversely affect hillside or soil stability, or be subject to landslide. In addition, numerous drainage and erosion control BMPs would be included in the project to ensure soil erosion in minimized. *N/A – Rail*. Rail improvements would not be located in this plan area.

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• be concentrated on the flatter portions of the site. With these policies, the Commission finds the Mello Bill LCP in conformity with Section 30253 of the Coastal Act. With regards to seismic hazards, the Mello Bill LCP recognizes that there is a "relatively very high earthquake hazard in the study area." However, no proven active faults exist in the study area. The technical background report on hazards prepared by PRC Toups Corporation recommends that Uniform Building Code be implemented and that geologic/soils investigations be prepared for all subdivisions to mitigate potential seismic risks. The City of Carlsbad currently follows their procedures. The Commission finds that while additional technical search assessing seismic hazards should be encouraged, the implementation of the above procedures are adequate to find the LCP in conformity with Section 30253 of the Coastal Act.	
(4) Public Works As part of the technical background reports prepared by PRC Toups Corporation for the balance of the Carlsbad LCP, an evaluation of sewer, water, and traffic circulation systems in the City of Carlsbad was performed. These issues, which are basically city-wide or regional issues, are more appropriately addressed in the balance of the Carlsbad LCP. The PRC Toups Report contains the following summary statement. "In summary, major water, sewer and traffic circulation systems are either available or must be provided across the southern section of Carlsbad to serve urban development to the east. These systems can also serve the Mello Bill properties. The issues, therefore, concern alignment of these needed facilities. Most important of these systems concerns the construction of Poinsettia Lane. This road is needed as a major arterial by 1995. A complete analysis of transportation needs and projections is contained within the Public Works Technical Paper within the Carlsbad LCP". The Commission finds that the issues of water, sewer, and traffic circulation and the alignment of these facilities are more appropriately addressed in the balance of the Carlsbad LCP. With regards to access, Poinsettia Lane may be extended from its current terminus eastward to the eastern boundary of the Standard Pacific site. In the balance of the Carlsbad LCP, the extension of Poinsettia Lane through coastal zone agricultural areas shall be analyzed. The Commission makes no finding at this time that the road is needed, or may be extended. With this stipulation, the Commission finds the Mello Bill LCP in conformity with Section 30254 of the Coastal Act.	*Potentially consistent - Highway.* The proposed highway improvements would result in access improvements at Poinsettia Lane, including ramp, pedestrian overcrossing and signal improvements. No impact to water or sewer systems within the City is anticipated. *N/A – Rail*. Rail improvements would not be located in this plan area.
(5) Recreation and Visitor-Serving Facilities Several Coastal Act policies require consideration of visitor-serving uses. The Mello Bill highlighted public recreation as one of the Chapter 3 policies to be specifically addressed in this LCP. Other applicable policies of the Act include Sections 30212.5, 30213, 30222, 30223 and 302500(c). Of particular interest is 30222 which states: "The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public	*Potentially consistent - Highway.* The I-5 NCC project's main purpose is to maintain or improve the existing and future traffic operations on the I-5, San Diego's primary access corridor, which would enhance coastal access by reducing congestion and providing designated Managed Lanes that include High Occupancy Vehicle (HOV) use that

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opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry." This section of the Act clearly indicates that sites suitable for visitor-serving commercial recreational facilities have priority over private residential, general commercial and industrial uses, but not over agriculture. The Occidental Land, Inc. property located adjacent to I-5 is appropriate for visitor-serving facilities. The need for additional visitor-serving facilities in the Carlsbad area is documented by PRC Toups and its technical background report. If Occidental elects to develop according to a master plan, it is required to provide 35% of the commercial uses as visitor-serving. The Commission finds that such a policy is required to implement Section 30222. The Commission finds that it has protected public recreational opportunities by encouraging visitor-serving uses.	would also serve buses and families travelling to the coast to reach visitor-serving and recreation destinations. The project would also provide new recreational opportunities via new and enhanced pedestrian and bicycle resources and associated support facilities. *N/A – Rail*. Rail improvements would not be located in this plan area.
(6) Visual/Land Resources Sections 30244, 30251 and 30252 of the Coastal Act address the visual resource issues. In response to these Sections of the Coastal Act, PRC Toups recommends several actions, including: _ sign control; _ parking requirements; _ implementation of the Scenic Preservation Overlay Zone of the City of Carlsbad on the Occidental Land, Inc. property; _ preservation of natural vegetation on steep slopes; and _ preservation/mitigation of archaeological resources. The purpose of these recommendations is to ensure that visual, archaeological and natural resources are protected, preserved or where necessary mitigated prior to construction; and, that new development will not visually degrade the area. This is of particular concern to the Occidental Land, Inc. property, adjacent to I-5 a major coastal access route. Rancho La Costa property, which is in the viewshed of Batiquitos Lagoon is adequately protected by the erosion control standards discussed above. These standards will require development to be sited away from the visible steep slopes. Additional conditions on sign control will minimize visual obstruction of coastal views associated with unnecessary large signs.	*Potentially consistent - Highway.* The highway improvements would not adversely impact significant coastal views to the shoreline or inland natural/open space areas, and have been designed to retain significant natural vegetation features where feasible. However, the I-5 NCC project includes various improvements that would result in removal of existing vegetation and grading of existing landforms, and construction of new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). However, measures are included to minimize view impacts to natural features and visual resources including architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, including various methods of landscape screening of facility improvements. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space where feasible. New facility signage would generally include changeable message signs and congestion pricing

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	signage consistent with standard Caltrans design, which is and would be consistent throughout the corridor. Based on the draft EIR/EIS prepared for the I-5 NCC project, no significant impacts to archaeological resources would result from the proposed project, standard monitoring and data recovery measures would be implemented to ensure the highway improvements do not result in adverse impacts to cultural resources. *N/A – Rail*. Rail improvements would not be located in this plan area.
(7) Public Access Public access pursuant to Sections 30210 through 30214 was not appropriate for two reasons. First, none of the properties are located between the shoreline and the first public road and thus provided no opportunity for direct physical access to the shoreline. Second, the properties covered by this LCP are not contiguous and provide no access to shoreline, and thus access could not have been provided internally within the LCP boundaries or under the express requirements of Section 30212. Therefore, the Commission finds that the requirement of Public Resources Code Section 30500(a) that each land use plan contain a "specific public access component" is not relevant to this LCP.	*N/A – Highway/Rail.* Public access findings specific to this plan area are not required.
MELLO II SEGMENT	
AGRICULTURE	
Policy 2-1 CONSERVATION OF AGRICULTURAL LANDS (a) Basic Agricultural Policies (1) Coastal Agriculture: Consistent with the provisions of Sections 30241 and 30242 of the Coastal Act, it is the policy of the City to contribute to the preservation of the maximum amount of prime agricultural land throughout the coastal zone by providing for the balanced, orderly conversion of designated non-prime coastal agricultural lands. Non-prime agricultural lands identified on Map X, including the 301.38 acre Carltas Property, are designated Coastal Agriculture and shall be permitted to convert to urban uses subject to the agricultural mitigation or feasibility provisions set forth in the LCP. Any acreage under the control of a public entity for a public recreation or open space use shall be exempt from Policy 2-1 and be permitted to convert from an agricultural use without satisfying one of the three conversion options.	*Potentially consistent – Highway/Rail.* No impacts to agricultural resources are anticipated from proposed rail improvements. The TREP/PWP highway and community/ resource improvements will encroach onto agricultural lands, including a greenhouse and strawberry fields. However, the proposed encroachments are linear in nature and would not preclude continued agricultural activities on the affected sites. Further, the affected areas are not specifically identified as supporting long-term agricultural activity. Proposed highway improvements would result in the loss of approximately 14 acres of Prime

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(2) Conversion of Coastal Agriculture: Conversion of designated coastal agricultural lands shall be permitted provided that: a) conversion would preserve prime agricultural lands within the statewide coastal zone consistent with Sections 30241 and 30242 or concentrate new development consistent with Section 30250 of the Coastal Act; or b) continued or renewed agricultural use is not feasible. (3) Conversion Options: Conversion of non-prime coastal agricultural lands shall be permitted pursuant to either Option 1 - Mitigation, Option 2 - (Feasibility Analysis) or Option 3 - Conversion Fee as set forth below in this policy. Consistent with Section 30242 of the Act, no feasibility analysis shall be required if a landowner selects Option 1 or Option 3. Option 1 - Mitigation (Prime Land Exchange) Non-prime coastal agricultural lands shall be converted to urban use consistent with the Carlsbad General Plan if, prior to approval of a subdivision map, a mitigation program is in effect that permanently preserves one acre of prime agricultural land within the statewide Coastal Zone for each acre of net impacted agricultural land in the LCP that is converted. For purposes of calculating required mitigation acreage, net impacted agricultural lands are the parcels and acreages designated on Map X and the 301.38 acre Carltas Property and areas containing sensitive coastal resources that would preclude development. The standards and procedures for such a mitigation program shall be set forth in LCP implementing ordinances. Recipients of prime agricultural land interests pursuant to this policy shall be limited to: a) local or state agencies; or, b) tax exempt organizations whose principal charitable purposes are consistent with the agricultural mitigation program and qualify under Section 501(c)(3) of the U.S. Internal Revenue Code. Further, mitigation priority shall be given to preserving prime agricultural lands in the coastal zones of counties selected by the State Coastal Conservancy for pilot programs funding, and other counties with similarly qualified programs. Option 2 - Determination of Agricultural Feasibility If the feasibility of continued agriculture is questionable, either the City or involved landowners may complete an agricultural feasibility study for: a) all coastal agricultural lands in the LCP; b) 3 or 4 subareas (See Exhibit 3.3, Page 26) which constitute logical subunits; or, c) contiguous landholdings in a single ownership of at least 100 acres. If Option 2 is selected, that portion of the study area determined to be feasible for continued agriculture, if	Farmland and 2 acres of Unique Farmland at Cannon Road. The location of this impact would occur however in the Agua Hedionda Lagoon planning area of the city, which is the only uncertified segment of the City's certified LCP. As such, the Coastal Commission retains permit jurisdiction in this area with the standard of review for the proposed improvements being the Chapter 3 policies of the Coastal Act.

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any, may be converted upon request of the landowner to urban use subject to compliance with the provisions of Option 1 above. That portion of the study area determined not to be feasible for continued agriculture could be converted only after: a) the City approves the feasibility study; b) an LCP amendment is prepared and submitted to the Coastal Commission that provides for the conversion; and c) the Coastal Commission certifies the LCP amendment as to its conformance with the Coastal Act. Option 3 - Agricultural Conversion Mitigation Fee In lieu of the procedures established by the above options, property may be converted to urban uses upon payment of an Agricultural Conversion Mitigation Fee. The amount of the fee shall be determined by the City Council at the time it considers a coastal development permit for urban development of the property. The fee shall not be less than $5,000 nor more than $10,000 per net converted acre of agricultural land and shall reflect the approximate cost of preserving prime agricultural land pursuant to the off-site mitigation program (Option 1). The fees shall be paid prior to the issuance of building permits for the project. All mitigation fees collected under this section shall be deposited in the state Coastal Conservancy Fund and shall be expended by the State Coastal Conservancy in the following order of priority: a) Restoration of natural resources and wildlife habitat in Batiquitos Lagoon. b) Development of an interpretive center at Buena Vista Lagoon. c) Restoration of beaches managed for public use in the coastal zone in the City of Carlsbad. d) Purchase of agricultural lands for continued agricultural production within the Carlsbad Coastal Zone as determined by the Carlsbad City Council. e) Agricultural improvements which will aid in continuation of agricultural production within the Carlsbad Coastal Zone as determined by the Carlsbad City Council. For purposes of implementation, neither Option 1 nor Option 2 nor Option 3 shall have priority over the other. (4) Underlying Urban Designations of Coastal: To maximize and expedite the preservation of prime agricultural lands throughout the state coastal zone, all parcels designated coastal agriculture in the LCP including the 301.38 acre Carltas Property shall have an underlying urban land use designation as identified on Map Y, and the Carlsbad Ranch Specific Plan. Conversions of coastal agriculture land permitted by the City in conformance with either Option 1 or Option 2 or Option 3 as set forth in Policy 2 shall be consistent with the land use designations on Map Y and the Carlsbad Ranch Specific Plan.	

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(5) Conversions of Coastal Agriculture Inconsistent with Underlying Urban Designations: Conversions of parcels designated coastal agriculture that are requested for uses other than the underlying land use designation on Map Y and the Carlsbad Ranch Specific Plan shall be subject to an LCP amendment to allow the City and Coastal Commission to determine the consistency of proposed urban uses with other applicable provisions of the LCP and the Coastal Act. (b) Designated Coastal Agricultural Lands "Designated Coastal Agricultural Lands" are those agricultural lands identified on Map X (See Exhibit 3.3, Page 26) attached to the Land Use Plan certified on October 24, 1985. The following are the lands identified on Map X (See Exhibit 3.3, Page 26): (c) Permitted Uses on Designated Coastal Agricultural Lands The land uses described below shall apply to any designated coastal agricultural land which has not been approved for development. (1) On any Class I through Class IV Agricultural Lands: (See Exhibit 4.2, Page 27) the following uses only are permitted: a) Cattle, sheep, goats and swine production, provided that the number of any one or combination of said animals shall not exceed one animal per half acre of lot area. Structures for containing animals shall not be located within fifty feet of any habitable structure on the same parcel, nor within three hundred feet of an adjoining parcel zoned for residential uses. b) Crop production. c) Floriculture. d) Horses, private use. e) Nursery crop production. f) Poultry, rabbits, chinchillas, hamsters and other small animals, provided not more than twenty-five of any one or combination thereof shall be kept within fifty feet of any habitable structure, nor within three hundred feet of an adjoining parcel zoned for residential uses. g) Roadside stands for display and sale of products produced on the same premises, with a floor area not exceeding two hundred square feet, and located not nearer than twenty feet to any street or highway.	

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h) Tree farms. i) Truck farms. j) Wildlife refuges and game preserves. k) Other uses or enterprises similar to the above customarily carried on in the field of general agriculture including accessory uses such as silos, tank houses, shops, barns, offices, coops, stables, corrals, and similar uses required for the conduct of the uses above. l) One single family dwelling per existing legal building parcel. (2) On any Class V through VIII Agricultural Lands (See Exhibit 4.2, Page 27) the following uses only are permitted: a) All of the permitted uses listed above. b) Hay and feed stores. c) Nurseries, retail and wholesale. d) Packing sheds, processing plants and commercial outlets for farm crops, provided that such activities are not located within 100 feet of any lot line. e) Greenhouses, provided all requirements for yard setbacks and height as specified in Chapter 21.07 of the Code are met.	
POLICY 2-2 LCPA 90-08 CARLSBAD RANCH SPECIFIC PLAN "MIXED-USE" DEVELOPMENT	*N/A - Highway/Rail.*
POLICY 2-3 LANDS HISTORICALLY IN AGRICULTURE YET NOT DESIGNATED COASTAL AGRICULTURE The following properties which have been in agricultural production in the past shall be permitted to convert to urban uses. Because of unique circumstances associated with these parcels, conversion to urban uses would not create any significant adverse impact on the area's agricultural economy, directly or indirectly, and such conversion would therefore not require the mitigation. (a) State owned parcel northerly of the intersection of Palomar Airport Road and Carlsbad Boulevard The 20-acre parcel owned by the State of California, APN 210-09-7, located west of the AT&SF Railroad tracks at the Palomar Airport Road/Carlsbad Boulevard interchange, may be converted to Public Recreation use. This property is surrounded by major streets and the railroad, with residential development conflicts arising on the northern and western	*Potentially consistent – Highway/Rail.* See discussion under Policy 2-1, above.

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boundaries. The site will be needed for beach parking facilities as the demand for beach access increases in the future. The property should remain in agricultural production until such time as parking facilities can be constructed by the State of California. Approximately 1,500 parking spaces could be provided on the site, giving excellent public access to the entire stretch of underdeveloped South Carlsbad State Beach. (See also Policy 7-9 on Page 69.) (b) Burroughs and Ecke Parcels. The 50-acre parcel owned (APN 210-09-0) by Burroughs Corporation and the 6-acre parcel (APN 210-09-0) owned by Ecke located south of Cannon Road between I-5 and the AT&SF Railroad tracks may be converted to commercial uses. These properties are in effect isolated vacant properties within a developed commercial area. The San Diego Gas and Electric Co. power plant is located to the north, a major retail commercial development ("Car Country") is immediately across the freeway to the east, industrial development is on the southern boundary, and residential development is to the west separated by the AT&SF Railroad tracks and the State-owned property described in Policy 2-3 a. above. (c) Ukegawa Parcel. The 13.89 acre parcel (APN 212-040-25) owned by Ukegawa, located on the south side of Palomar Airport Road, may be converted to industrial uses that should be supportive of the agricultural economy. The site has not been in use for field crop production for many years, and has been the subject of numerous authorized and unauthorized fills in recent years. Because of the substantial importation of fill dirt, the site cannot be designated as possessing agricultural soils. Because of the access available to Palomar Airport Road on the parcel, and its location between agricultural lands and developed industrial uses to the east, the site shall be designated for Planned Industrial use, and should be developed for agricultural processing purposes. Conversion of these parcels to urban uses will complete the development of established developed areas, thereby contributing to the creation of stable urban/rural boundaries. Such conversion should reduce market pressures for the conversion to urban uses of other agricultural lands suitable for continued agricultural production.	
POLICY 2-4 SMALL SCATTERED INEFFECTIVE AGRICULTURAL LANDS Approximately 100 acres of agricultural use are located in scattered parcels along El Camino Real both north and south of Aqua Hedionda Lagoon. The small individual size of these parcels, together with the fact that they are not contiguous, precludes their effective use as agricultural land in the future. These lands are therefore designated for residential development, at a maximum density of one dwelling unit per acre as rural residential estate Section 21.09 or as residential agriculture zone, Section 21.08 of Carlsbad Zoning Ordinance. No further land divisions shall be allowed in the area under current agricultural production except in compliance with these policies.	*Potentially consistent – Highway/Rail.* See discussion under Policy 2-1, above.

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POLICY 2-8 CITY SUPPORT OF AGRICULTURAL DRAINAGE PROJECTS The City will support proposals for public expenditures for minor drainage improvements and other similar projects which are designed to make land more suitable for agricultural use, within areas designated in the Land Use Element of the General Plan for continued agricultural use.	*N/A – Highway/Rail.* The TREP/PWP does not include, and will not affect drainage improvements and other similar projects, which are designed to make land more suitable for agricultural use.
ENVIRONMENTALLY SENSITIVE HABITAT AREAS	
POLICY 3-1 CARLSBAD HABITAT MANAGEMENT PLAN Certain areas of Carlsbad coastal zone have very high habitat value. These areas are not suitable for farming. These areas exhibit a large number and diversity of both plant and animal species, several of which are threatened because of extensive conversion of mixed Chaparral and Coastal Sage Scrub habitats to urban or agricultural uses. Also, well-established and well-maintained vegetation is a major deterrent to soil erosion and attendant difficulties. *See Mello I Segment Policy 7 – Protection of Sensitive Native Vegetation Areas above.*	*Potentially consistent – Highway.* See discussion under corresponding Mello I Segment Policy 7, above. *Potentially consistent – Rail.* Impacts to sensitive habitat areas throughout the City are unknown, but would be evaluated for consistency with these policies to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
3-1.1 Habitat Management Plan *See Mello I Segment Policy 7-1.1 Habitat Management Plan above.*	*Potentially consistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.1, above. *Potentially consistent – Rail.* Impacts to sensitive habitat areas throughout the City are unknown, but would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
3-1.2 Environmentally Sensitive Habitat Areas (ESHA) *See MELLO I Segment Policy 7-1.2 above.*	*Potentially inconsistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.2, above. *Potentially inconsistent – Rail.* Proposed rail improvements would potentially result in impacts to ESHA where the rail facilities cross Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, and other areas along the corridor containing sensitive wetland and upland habitat. Such impacts are likely inconsistent with the

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	permitted uses identified in this Policy.
3-1.3 Coastal Sage Scrub *See MELLO I Segment Policy 7-1.3 above.*	*Potentially inconsistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.3, above. *Potentially inconsistent – Rail.* See discussion under Policy 3-1.2, above.
3-1.4 Oak Woodland *See MELLO I Segment Policy 7-1.4 above.*	*Potentially consistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.4, above. *Potentially consistent – Rail.* Site-specific studies identifying the occurrence of oak woodland habitat in the corridor, and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
3-1.5 Streams *See MELLO I Segment Policy 7-1.5 above.*	*Potentially consistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.5, above. *Potentially consistent – Rail.* Site-specific studies identifying the occurrence of streams in the corridor, and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
3-1.6 Ephemeral Drainages and Ephemeral Streams *See MELLO I Segment Policy 7-1.6 above.*	*Potentially consistent – Highway.* See discussion under corresponding Mello I Segment Policy 7.1-6, above. *Potentially consistent – Rail.* Site-specific studies identifying the occurrence of ephemeral drainages and streams in the corridor, and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency

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	during project-specific review, as applicable.
3-1.7 Wetlands Pursuant to California Public Resources Code Section 30121 and Title 14, California Code of Regulations Section 13577(b), 'wetland' means lands within the coastal zone, which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Wetland shall include land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. A preponderance of hydric soils or a preponderance of wetland indicator species shall be considered presumptive evidence of wetland conditions. Wetlands shall be delineated following the definitions and boundary descriptions in Section 13577 of the California Code of Regulations. Pursuant to California Public Resources Code Section 30233, no impacts to wetlands shall be allowed except as follows: 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 channels, turning basins, vessel berthing and mooring areas, and boat launching ramps. (3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland. (4) 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.	*Potentially inconsistent – Highway/Rail.* Highway and rail transportation improvements would result in minor development encroachments potentially resulting in direct impacts to coastal wetlands within the City. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor.

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(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intakes and outfall lines. (6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. (7) Restoration purposes. (8) Nature study, aquaculture, or similar resource dependent activities. b. Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems. c. In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any lagoon alterations shall be limited to very minor incidental public facilities, restorative measures, and nature study, if otherwise in accordance with this division. d. Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients, which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provision of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.	
3-1.8 Wetland Mitigation Requirements If impacts to a wetland are allowed consistent with Policy 3-1.7, mitigation shall be provided at a ratio of 3:1 for riparian impacts and 4:1 for saltwater or freshwater wetland or marsh impacts.	*Potentially inconsistent – Highway/Rail.* The TREP/PWP would result in minor development encroachments and fill in coastal wetlands within the City, and preliminary analysis indicates that impacts to wetlands likely can not be mitigated per an in-kind 4:1 (saltwater or freshwater marsh) mitigation ratio in the City. Additional City-specific analysis of potential wetland impacts is required to evaluate potential consistency with the mitigation requirements of this policy.
3-1.9 No Net Loss of Habitat *See MELLO I Segment Policy 7-1.9 above.*	*Potentially inconsistent – Highway/Rail.* The TREP/PWP would include facility encroachments potentially resulting in direct impacts to ESHA. The

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	proposed transportation improvements are potentially not considered a resource dependent use as required by Policy 7-1.2. However, the proposed project is designed to preserve and minimize adverse impacts to significant environmental areas of the City to ESHA and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. However, the proposed restoration efforts may not result in a no net loss of sensitive upland habitat solely within the City boundaries.
3-1.10 Upland Habitat Mitigation Requirements Where impacts to the habitats stated in 3-1.9 are allowed, mitigation shall be provided as follows: a. The no net loss standard shall be satisfied as stated in 3-1.9. Typically this will consist of creation of the habitat type being impacted (or substantial restoration where allowed) at a ratio of at least 1:1 as provided in the HMP. b. Onsite preservation is not eligible for mitigation credit in the coastal zone. Onsite or off-site open space preserve areas may be utilized to satisfy required mitigation for habitat impacts associated with development if the preserve areas are disturbed and suitable for restoration or enhancement, or they are devoid of habitat value and therefore suitable for the 1:1 mitigation component requiring creation or substantial restoration of new habitat. Substantial restoration is restoration that has the effect of qualitatively changing habitat type and may meet the creation requirement if it restores habitat type that was historically present, but has suffered habitat conversion or such extreme degradation that most of the present dominant species are not part of the original vegetation. Substantial restoration contrasts with enhancement activities, which include weeding or planting within vegetation that retains its historical character, and restoration of disturbed areas to increase the value of existing habitat which may meet other mitigation requirements pursuant to the HMP. c. Impacts to Coastal Sage Scrub shall be mitigated at an overall ratio of 2:1, with the creation component satisfying half of the total obligation. The remainder of the mitigation obligation shall be satisfied pursuant to the provisions of the HMP. d. Impacts to Southern Maritime Chaparral or Maritime Succulent Scrub shall be mitigated at an overall ratio of 3:1, with the creation component satisfying one-third of the total obligation. The remainder of the mitigation obligation shall be	*Potentially inconsistent – Highway/Rail.* The TREP/PWP is potentially consistent with portions of this policy that allow for onsite or off-site open space preservation areas if the preserve areas are disturbed and suitable for restoration or enhancement, or if they are devoid of habitat value and therefore suitable for the 1:1 mitigation component requiring creation or substantial restoration of new habitat. Further, habitat creation or restoration requirements may be partially or wholly fulfilled by acquisition of existing like habitat and/or retirement of development credits on existing like habitat with permanent preservation as part of the HMP preserve management plan. However, the proposed restoration efforts may not result in a no net loss of sensitive upland habitat solely within the City boundaries.

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satisfied pursuant to the provisions of the HMP. e. Impacts to Southern Mixed Chaparral, Native Grassland, and Oak Woodland shall be mitigated respectively at ratios of 1:1, 3:1, and 3:1 with the creation component satisfying the obligation or one-third of the total obligation. The remainder of the mitigation obligation shall be satisfied pursuant to the provisions of the HMP. f. Mitigation for impacts within the coastal zone should be provided within the coastal zone if possible, particularly the 1:1 creation component, in order to have no net loss of habitat within the coastal zone. Mitigation measures on land outside the Coastal Zone may be acceptable if such mitigation would clearly result in higher levels of habitat protection and value and/or would provide significantly greater mitigation ratios, and the mitigation area is part of the HMP. Land area inside and outside the coastal zone which serves as mitigation for habitat impacts in the coastal zone shall be permanently retired from development potential and secured as part of the HMP preserve management plan as a condition of development approval. g. Habitat mitigation requirements other than the creation or substantial restoration component may be partially or wholly fulfilled by acquisition of existing like habitat and/or retirement of development credits on existing like habitat with permanent preservation as part of the HMP preserve management plan. h. All mitigation areas, onsite and offsite, shall be secured with a conservation easement in favor of the wildlife agencies. In addition, a preserve management plan shall be prepared for the mitigation areas, to the satisfaction of the City, the wildlife agencies, and the Coastal Commission. The preserve management plan shall ensure adequate funding to protect the preserve as open space and to maintain the biological values of the mitigation areas in perpetuity. Management provisions and funding shall be in place prior to any impacts to habitat. At a minimum, monitoring reports shall be required as a condition of development approval after the first and third year of habitat mitigation efforts. The preserve management plan shall be incorporated into the Implementation Plan of the LCP through an LCP amendment within one year of Commission certification of the HMP as part of the certified LCP. i. If any conflict should arise between these Policies of the LCP and the provisions of the HMP, the LCP shall take precedence. If any conflict should arise between the policies of the certified Mello II LUP and the certified Implementation Plan, the policies of the certified Mello II LUP shall take precedence.	
3-1.11 Highly Constrained Properties *See MELLO I Segment Policy 7-1.11 above.*	*Potentially inconsistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.11, above. *Potentially inconsistent – Rail.* Project-specific analysis of potential ESHA impacts is required to determine consistency with this policy as it relates to either quantitative habitat preservation

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	requirements or occurrence/ amendment of Hardline preserve boundaries. For identified facility encroachments into ESHA, preservation of at least 75% of the habitat onsite may not be feasible for conservation, presenting a conflict with the requirements of this Policy.
3-1.12 Buffers and Fuel Modification Zones Buffers shall be provided between all preserved habitat areas and development. Minimum buffer widths shall be provided as follows: a. 100 ft. for wetlands b. 50 ft. for riparian areas c. 20 ft. for all other native habitats (coastal sage scrub, southern maritime chaparral, maritime succulent scrub, southern mixed chaparral, native grassland, oak woodland) Any proposed reductions in buffer widths for a specific site shall require sufficient information to determine that a buffer of lesser width will protect the identified resources. Such information shall include, but is not limited to, the size and type of the development and/or proposed mitigation (such as planting of vegetation or the construction of fencing) that will also achieve the purposes of the buffer. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the Coastal Commission staff shall be consulted in such buffer determinations. No development, grading, or alterations, including clearing of vegetation, shall occur in the buffer area, except for: a. Modification Zone 3 to a maximum of 20 ft for upland and non-riparian habitat. No fuel modification shall take place within 50 ft. of riparian areas, wetlands, or oak woodland. b. For buffer areas 50 ft. or greater in width, recreation trails and public pathways within the first 15 feet of the buffer closest to the development, provided that construction of the trail or pathway and its proposed use is consistent with the preservation goals for the adjacent habitat, and that appropriate measures are taken for physical separation from sensitive areas. Buffer areas that do not contain native habitat shall be landscaped using native plants. Signage and physical barriers such as walls or fences shall be required to minimize edge effects of development.	*Potentially inconsistent – Highway/Rail.* The existing location of the transportation facilities requires that the proposed projects occur in areas within and adjacent to wetlands, riparian and native habitats. Therefore, the project would not provide the minimum buffers required, and would also result in unpermitted uses in required buffers. Although this policy allows for reduced buffer widths on a site specific basis where it can be demonstrated that the project design with reduced buffer width will achieve the purposes of the buffer, it may be difficult to provide the required habitat buffers required in this policy without further impacting sensitive resources presently located adjacent to the transportation facilities.
3-1.13 Invasive Plants	*Potentially consistent – Highway.* See discussion under corresponding Mello I Segment Policy 7-1.15,

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See MELLO I Segment Policy 7-1.15 above.	above. *Potentially consistent – Rail.* Site-specific analyses and landscape plans that include native, drought tolerant plants as appropriate would be prepared and approved prior to development, as required for specific-project review.
POLICY 3-2 BUENA VISTA LAGOON Developments located along the first row of lots bordering Buena Vista Lagoon, including the parcel at the mouth of the lagoon (See Exhibit 4.5, Page 75), shall be designated for residential development at a density of up to 4 dwelling units per acre. Proposed development in this area shall be required to submit topographic and vegetation mapping and analysis, as well as soils reports, as part of the coastal development permit application. Such information shall be provided as a part of or in addition to any required Environmental Impact Report, and shall be prepared by qualified professionals and in sufficient detail to enable the City to locate the boundary of wetland and upland areas and areas of slopes in excess of 25%. Topographic maps shall be submitted at a scale sufficient to determine the appropriate developable areas, generally not less than a scale of 1" - 100' with a topographic contour interval of 5 feet, and shall include an overlay delineating the location of the proposed project. Criteria used to identify any wetlands existing on the site shall be those of Section 30121 of the Coastal Act and based upon the standards of the Local Coastal Program mapping regulations, and shall be applied in consultation with the State Department of Fish and Game. Development shall be clustered to preserve open space for habitat protection. Minimum setbacks of at least 100 feet from wetlands shall be required in all development, in order to buffer such sensitive habitat areas from intrusion unless otherwise permitted pursuant to Policy 3-1.12. Such buffer areas, as well as other open space areas required in permitted development to preserve habitat areas, shall be permanently preserved for habitat uses through provision of an open space easement as a condition of project approval. In the event that a wetland areas is bordered by steep slopes (in excess of 25%) which will act as a natural buffer to the habitat area, a buffer area of less than 100 feet in width may be permitted. The density of any permitted development shall be based upon the net developable area of the parcel, excluding any portion of a parcel which is in wetlands. Storm drain alignments as proposed in the Carlsbad Master Drainage Plan which would be carried through or empty into Buena Vista Lagoon shall not be permitted, unless such improvements comply with the requirements of Sections 30230, 30231, 30233, and 30235 of the Coastal Act by maintaining or enhancing the functional capacity of the lagoon in a manner acceptable to the State Department of Fish and Game. Land divisions shall only be permitted on parcels bordering the Lagoon pursuant to a single planned unit development permit for the entire original parcel.	*Potentially inconsistent – Highway/Rail.* The proposed project will result in minor development encroachment into Buena Vista Lagoon and, as the existing location of the highway and rail facilities requires that proposed projects occur within and adjacent to the Lagoon, the TREP/PWP would not meet the standard buffers recommended by this Policy. However, the TREP/PWP transportation improvements are designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor.
POLICY 3-3 BATIQUITOS LAGOON	*Potentially inconsistent – Highway/Rail.* The

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Erosion, drainage, and sedimentation of Batiquitos Lagoon were previously addressed, in the certified Local Coastal Program prepared by the Coastal Commission for the areas subject to AB462 (Mello I Segment) (See Exhibit 1.1). Development within the area which is the subject of that plan AB462 (Mello I Segment), and of AB1971 (Mello II Segment), shall also be required to meet those same policies. Much of the Batiquitos Lagoon watershed is designated in this plan for continued agricultural use which does not require a coastal development permit. When a coastal development permit is required, however, conditions shall be imposed which will assure that the permitted development will be carried out in a manner that assures protection of the water quality of the Lagoon. Removal of major vegetation, for instance, requires a coastal development permit, and such permitted activity shall be conditioned to limit the manner, time, and location of vegetation removal so as to minimize soil erosion. Development shall be clustered to preserve sensitive habitat areas and maintain the maximum amount of permanent open space feasible. At a minimum, the following policies shall regulate development in areas adjacent to the lagoon: a) A minimum setback of 100 feet from the wetland shall be required, with the wetland area determined as described in Policy 3-2, Buena Vista Lagoon on Page 50. b) At least two-thirds (2/3) of any permitted development shall be clustered on the half of the property furthest away from the lagoon at the base of the bluff. c) Existing mature trees shall be preserved. d) An offer to dedicate land for public recreation use, in favor of the City of Carlsbad or State Coastal Conservancy and irrevocable for a term of 21 years, shall be required as a condition of development. The required land dedication shall be of a size adequate to accommodate public use facilities including some picnic tables and public parking, and shall include a public access trail parallel to the lagoon shore of at least 15 feet in width with unobstructed views to the lagoon. e) To facilitate provision of public use areas and preservation of environmentally sensitive lands, and to maintain the outstanding visual resources in the area surrounding the lagoon, an additional density credit of one dwelling unit per acre of developed land shall be provided for each two and one half per cent (2 1/2%) of total lot area, excluding wetlands, which is maintained in open space and public recreation in excess of fifty per cent (50%) of the total lot area, excluding wetlands. f) Land divisions shall only be permitted on parcels bordering the lagoon pursuant to a single planned development permit over the entire original parcel. The base residential density shall be a maximum of 12 dwelling units.	proposed transportation improvements will result in minor development encroachment into the Lagoon and, as the existing location of the highway and rail facilities requires that proposed projects occur within and adjacent to the Lagoon, the TREP/PWP would not meet the standard buffers recommended by this Policy. As described under Policy 3.2, above, the proposed TREP/PWP is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible. The project is also designed to take advantage of new opportunities to enhance these areas for the public's use by providing new recreational opportunities (trails, etc).
POLICY 3-4 GRADING AND LANDSCAPING REQUIREMENTS	*Potentially inconsistent - Highway.* The I-5 improvements would minimize potential impacts to

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In addition to the requirements of the model grading ordinance in the Carlsbad Master Drainage Plan, permitted new development shall also comply with the following requirements: a) All development must include mitigation measures for the control of urban runoff flow rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinance, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the following additional requirements. The SUSMP, dated April 2003 and as amended, the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP. b) All graded areas shall be landscaped prior to October 1st of each year with either temporary or permanent landscaping materials, to reduce erosion potential. Such landscaping shall be maintained and replanted if not well-established by December 1st following the initial planting. c) - q) *See Mello I Segment STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above.*	ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation of BMPs. However, additional analysis is necessary to determine if the improvements would be designed consistent with the specific development standards of this policy including design to meet, infiltrate, filter or treat the runoff produced from each storm event up to and including the 85th percentile 24-hour storm event. *Potentially inconsistent - Rail.* Specific rail improvement design is unavailable to determine consistency with this policy. Site-specific studies and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
POLICY 3-5 KELLY RANCH/MACARIO CANYON AREA	*N/A – Highway/Rail.* The TREP/PWP would have no affect on this area.
POLICY 3-6 SEAPOINTE / ENCINAS CREEK	*N/A – Highway/Rail.* The TREP/PWP would have no affect on this area.
POLICY 3-7 CITY OWNED LANDS ADJACENT TO MACARIO CANYON AND VETERANS MEMORIAL PARK	*N/A – Highway/Rail.* The TREP/PWP would have no affect on these City owned lands.
POLICY 3-8 OTHER PARCELS – SPECIFIC HABITAT PROTECTION STANDARDS	*N/A – Highway/Rail.* The TREP/PWP would have no affect on these parcels.
GEOLOGIC, FLOODPLAIN, AND SHORELINE HAZARD AREAS	
POLICY 4-1 COASTAL EROSION I. Development Along Shoreline a. For all new development along the shoreline, including additions to existing development, a site-specific geologic investigation and analysis similar to that required by the Coastal Commission's Geologic Stability and Blufftop Guidelines shall be required; for permitted development, this report must demonstrate bluff stability for 75 years, or the expected lifetime of the structure, whichever is greater. Additionally, permitted development shall incorporate, where feasible, sub-drainage systems to remove groundwater from the bluffs, and shall use drought-resistant vegetation in landscaping, as well as adhering to the standards for erosion control contained in the Carlsbad Master Drainage Plan. A waiver of public liability shall be required for any permitted development for which an assurance	*N/A – Highway/Rail.* The TREP/PWP does not include shoreline development that would result in beach sand erosion.

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of structural stability cannot be provided. All development must include mitigation measures for the control of urban runoff flow rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinances, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the following additional requirements. The SUSMP, dated April 2003 and as amended, the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP. b. - p. - *See Mello I Segment STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above.* II. Beach Sand Erosion Pursue mitigation measures which address the causes of beach sand erosion; sand dredging and use of the Longard Tube to reduce wave energy are two such measures which have been suggested. The City should continue to participate in the Regional Coastal Erosion Committee's studies of the causes and cures for shoreline erosion. III. Shoreline Structures Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. As a condition of coastal development permit approval, permitted shoreline structures may be required to replenish the beach with imported sand. Provisions for the maintenance of any permitted seawalls shall be included as a condition of project approval. Projects which create dredge spoils shall be required to deposit such spoils on the beaches if the material is suitable for sand replenishment. IV. Undevelopable Shoreline Features No development shall be permitted on any sand or rock beach or on the face of any ocean bluff, with the exception of accessways to provide public beach access and of limited public recreation facilities.	

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POLICY 4-2 LANDSLIDES AND SLOPE INSTABILITY The soils investigations now required as part of the land subdivision process are adequate to identify with specificity areas of landslide and instability. However, these investigations will need to be particularly thorough in those areas with La Jolla Group soils which have been identified for potential future development. Currently, soils investigations are only required for subdivisions. In the future, any development proposed for areas known to be prone to landslide shall include a geologic investigation identifying appropriate mitigation measures, and such geologic report shall be substantially as has been required by the Coastal Commission's Geologic Stability and Blufftop Development Guidelines.	*Potentially consistent - Highway.* The improvements would occur on steeper slopes potentially subject to landslide and instability; however, a draft EIR/EIS has been prepared for the I-5 NCC project includes soils and geotechnical studies that document the project will not adversely affect hillside or soil stability. *Potentially consistent – Rail.* Specific rail improvement design is unavailable to determine consistency with this policy. Site-specific studies and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
POLICY 4-3 ACCELERATED SOIL EROSION <u>Areas West of I-5 and the Existing Paseo del Norte and Along El Camino Real Upstream of Existing Storm Drains</u> For areas west of the existing Paseo del Norte, west of I-5 and along El Camino Real immediately upstream of the existing storm drains, the following policy shall apply: a. All development must include mitigation measures for the control of urban runoff rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinance, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the additional requirements contained herein. The SUSMP dated April 2003 and as amended, the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP. Such mitigation shall become an element of the project, and shall be installed prior to the initial grading. At a minimum, such mitigation shall require construction of all improvements shown in the Master Drainage Plan and amendments thereto between the project site and the lagoon (including the debris basin), as well as: revegetation of graded areas immediately after grading; and a mechanism for permanent maintenance if the City declines to accept the responsibility. Construction of drainage improvements may be through formation of an assessment district, or through any similar arrangement that allots costs among the various landowners in an equitable manner. b. – p. - *See Mello I Segment STANDARD PACIFIC (Aviara) <u>Policy 3</u> - Drainage, Erosion Control above*.	*Potentially inconsistent - Highway.* The TREP/PWP would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation of site-specific BMPs. However, additional analysis is necessary to determine if the transportation improvements would be designed consistent with the specific development standards of this Policy, including design to meet, infiltrate, filter or treat the runoff produced from each storm event up to and including the 85th percentile 24-hour storm event. See also discussion under Policy 4-2, above. *Potentially inconsistent - Rail.* Specific rail improvement design is unavailable to determine whether the specific development standards of this Policy will be met. Specific rail improvement design is unavailable to determine consistency with this policy. Site-specific studies and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide

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<u>All Other Areas</u> This policy applies to all other areas except those subject to Policies 3-5 and 3-7 (a) above. Any development proposal that affects steep slopes (25% inclination or greater) shall be required to prepare a slope map and analysis for the affected slopes. Steep slopes are identified on the PRC Toup maps. The slope mapping and analysis shall be prepared during the CEQA environmental review on a project-by-project basis and shall be required as a condition of a coastal development permit. (1) Slopes Possessing Endangered Species and/or Coastal Sage Scrub and Chaparral Plant Communities. For those slopes mapped as possessing endangered plant/animal species and/or Coastal Sage Scrub and Chaparral plant communities, Policies 3-1 and 3-8 and the following provisions would apply: a) Slopes of 25% grade and over shall be preserved in their natural state, unless the application of this policy would preclude any reasonable use of the property, in which case an encroachment not to exceed 10% of the steep slope area over 25% grade may be permitted. For existing legal parcels, with all or nearly all of their area in slope area over 25% grade, encroachment may be permitted; however, any such encroachment shall be limited so that at no time is more than 20% of the entire parcel (including areas under 25% slope) permitted to be disturbed from its natural state. This policy shall not apply to the construction of roads on the City's Circulation Element or the development of utility systems. Uses of slopes over 25% may be made in order to provide access to flatter areas if there is no less environmentally damaging alternative available. b) No further subdivisions of land or utilization of Planned Unit Developments shall occur on lots that have their total area in excess of 25% slope unless a Planned Unit Development is proposed which limits grading and development to not more than 10% of the total site area. c) Slopes and areas remaining undisturbed as a result of the hillside review process, shall be placed in a permanent open space easement as a condition of development approval. The purpose of the open space easement shall be to reduce the potential for localized erosion and slide hazards, to prohibit the removal of native vegetation except for permitted firebreaks and/or planting other fire retardant native vegetation and to protect visual resources of importance to the entire community. d) The percentage of steep slope encroachment listed in (a) and (b) above may be modified only for development consistent with the approved HMP and the resource habitat protection policies including Policy 3 above, and approved as part of the City's Incidental Take Permit pursuant to the adopted HMP. (2) All Other Steep Slope Areas:	guidance in determining Coastal Act consistency during project-specific review, as applicable.

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For all other steep slope areas, the City Council may allow exceptions to the above grading provisions provided the following mandatory findings to allow exceptions are made: a) A soils investigation conducted by a licensed soils engineer has determined the subject slope area to be stable and grading and development impacts mitigatable for at least 75 years, or life of structure. b) Grading of the slope is essential to the development intent and design. c) Slope disturbance will not result in substantial damage or alteration to major wildlife habitat or native vegetation areas and is consistent with the habitat protection policies contained in Policies 3-1 and 3-8. d) If the area proposed to be disturbed is predominated by steep slopes and is in excess of 10 acres, no more than one third of the total steep slope area shall be subject to major grade changes. e) If the area proposed to be disturbed is predominated by steep slopes and is less than 10 acres, complete grading may be allowed only if no interruption of significant wildlife corridors occurs. f) Because north-facing slopes are generally more prone to stability problems and in many cases contain more extensive natural vegetation, no grading or removal of vegetation from these areas will be permitted unless all environmental impacts have been mitigated. Overriding circumstances are not considered adequate mitigation. (3) *See Mello I Segment STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above*. (4) Required Drainage or Erosion Control Facility Maintenance Arrangements: Development approvals shall include detailed maintenance arrangements for providing the ongoing repair and maintenance for all approved drainage or erosion-control facilities. (5) Installation & Timing of Permanent Runoff and Erosion Control Devices: All permanent runoff-control and erosion-control devices shall be developed and installed prior to or concurrent with any onsite grading activities. (6) Required Open Space Easements on Undeveloped Slopes: All undevelopable slopes shall be placed in open space easements as a condition of development approval.	
POLICY 4-4 REMOVAL OF NATURAL VEGETATION When earth changes are required and natural vegetation is removed, the area and duration of exposure shall be kept at a minimum.	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP transportation improvements have been designed such that the amount of right-of-way required is the minimum necessary to fulfill the purpose and need of the project and to meet operational requirements of the facility. As such, the TREP/PWP is designed to minimize project grading and vegetation removal and would include

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	landscaping, as appropriate, following grading or vegetation removal.
POLICY 4-5 SOIL EROSION CONTROL PRACTICES a. Soil erosion control practices shall be used against "onsite" soil erosion. These include keeping soil covered with temporary or permanent vegetation or with mulch materials, special grading procedures, diversion structures to divert surface runoff from exposed soils, and grade stabilization structures to control surface water. All development must include mitigation measures for the control of urban runoff flow rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinance, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the additional requirements contained herein. The SUSMP, dated April 2003 and as amended, and the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP. b. – p. - *See Mello I Segment STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above*.	*Potentially inconsistent - Highway.* The proposed TREP/PWP would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation and adherence to BMPs. However, additional analysis is necessary to determine if the improvements can be designed consistent with the specific development standards of this Policy, including design to meet, infiltrate, filter or treat the runoff produced from each storm event up to and including the 85th percentile 24-hour storm event. *Potentially inconsistent - Rail.* Specific rail improvement design is unavailable to determine whether the specific development standards of this Policy can be met. Specific rail improvement design is unavailable to determine consistency with this policy. Site-specific studies and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
POLICY 4-6 "SEDIMENT CONTROL" PRACTICES a. Apply "sediment control" practices as a perimeter protection to prevent offsite drainage. Preventing sediment from leaving the site should be accomplished by such methods as diversion ditches, sediment traps, vegetative filters, and sediment basins. Preventing erosion is of course the most efficient way to control sediment runoff. All development must include mitigation measures for the control of urban runoff flow rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinance, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the following additional requirements. The SUSMP, dated April 2003 and as amended, and the Master Drainage Plan (1994) are hereby incorporated into the LCP by reference. Development must also comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP.	*Potentially inconsistent – Highway/Rail.* See discussions under Policy 4-5, above.

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b. – p. - *See Mello I Segment STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above*.	
POLICY 4-7 FLOOD HAZARDS (a) Storm Drainage Facilities in Developed Areas Storm drainage facilities in developed areas should be improved and enlarged according to the Carlsbad Master Drainage Plan, incorporating the changes recommended in the LCP. (b) City's Grading Ordinance The City's grading ordinance should be amended to greatly reduce the extent of onsite and offsite erosion due to construction activities. (See policies under Soil Erosion.) Although these are primarily erosion control measures, they will help to prevent sedimentation in downstream drainage facilities. (c) Storm Drainage Facilities in Undeveloped Areas Drainage improvement districts shall be formed for presently undeveloped areas which are expected to urbanize in the future. The improvement districts would serve to implement the Master Drainage Plan. Upstream areas in the coastal zone shall not be permitted to develop prior to installation of the storm drain facilities downstream, in order to assure protection of coastal resources. (d) Financing New Drainage Facilities New drainage facilities, required within the improvement districts, should be financed either by some form of bond or from fees collected from developers on a cost-per-acre basis. (e) 100-Year Floodplain Development shall continue to be restricted in 100-year floodplain areas. Continuing the policy of zoning 100-year floodplains as open space will permit natural drainage to occur without the need for flood control channels. No permanent structures or filling shall be permitted in the floodplain and only uses compatible with periodic flooding shall be allowed. (f) Master Drainage Plan Adopt the provisions of the Master Drainage Plan to ameliorate flood and drainage hazards within the planning area.	*Potentially inconsistent – Highway/Rail.* The TREP/PWP transportation improvements would result in minor, unavoidable development and filling for bridge supports within the 100-year floodplain.
POLICY 4-8 SEISMIC HAZARDS	*Potentially consistent - Highway.* According to

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The provisions of the State Uniform Building Code are not entirely adequate for earthquake protection. The City should continue to monitor the UBCs earthquake provisions and make recommendations for improvement. Most development in liquefaction-prone areas should have site-specific investigations done addressing the liquefaction problem and suggesting mitigation measures. New residential development in excess of four units, commercial, industrial, and public facilities shall have site-specific geologic investigations completed in known potential liquefaction areas.	the project soils and geotechnical studies, transportation improvements would not be adversely affected by seismic hazards. *Potentially consistent – Rail.* Project-specific soils and geotechnical studies would be prepared and approved prior to development and appropriate seismic measures incorporated into site design, as needed.
PUBLIC WORKS AND PUBLIC SERVICES CAPACITIES	
POLICY 5-5 POINSETTIA LANE Poinsettia Lane should be completed as a major arterial as indicated on the Local Coastal Program map by 1995. It should also provide direct coastal access to Carlsbad Boulevard. No assessment of agricultural lands shall be made to support this road extension.	*Potentially consistent - Highway.* The proposed highway improvements include an overcrossing at Poinsettia Lane to enhance coastal access for pedestrians and cyclists, as well as ramp and signal improvements. *Potentially consistent – Rail.* Proposed double tracking would occur within existing rail ROW and would not adversely affect Poinsettia Lane.
RECREATION AND VISITOR-SERVING USES	
POLICY 6-1 ADDITIONAL CITY PARKS Additional City parks will be required in conjunction with new development. These parks should be a minimum of five acres in order to accommodate a wide variety of both active and passive uses. Locations of additional City parks are Altimira Park (12 acres) and North La Costa Park (five acres); both are listed as proposed parks in the Parks and Recreation Element of Carlsbad's General Plan.	*Potentially consistent – Highway/Rail.* The TREP/PWP would consider parcels, in whole or in part, that are purchased for freeway widening but not required for use as permanent State right-of-way as potential opportunities for community pocket parks or public open space. Transportation improvements would have no adverse affect on the City's proposed parks identified in this Policy.
POLICY 6-2 REGIONAL PARK If the population of Carlsbad increases in accordance with SANDAG's projected Series V Population Forecasts, it is estimated that Carlsbad will need to develop a new regional park containing 200 to 300 acres in order to adequately serve the public. A location for a new regional park must, therefore, be established. Consideration should be given to a facility within the Aqua Hedionda Specific Plan Area, or adjacent lands. The Batiquitos Lagoon area should also be considered.	*Potentially consistent – Highway/Rail.* The TREP/PWP improvements would not affect the City's ability to establish a new regional park and could help facilitate this policy as the TREP/PWP includes community enhancement measures such that parcels, in whole or in part, that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space.
POLICY 6-3 ENCINA FISHING AREA	*N/A – Highway/Rail.* The TREP/PWP would not

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The water related Encina fishing area located adjacent to the San Diego Gas and Electric Company's power plant should be maintained for public use with no fees (See Exhibit 4.9, Page 76.) (See Policy 7-7, Page 68.)	affect the City's ability to maintain the Encina Fishing area.
SHORELINE ACCESS	
POLICY 7-2 SHORELINE ACCESS SIGNAGE The Coastal Conservancy and California State Department of Transportation (CALTRANS) have undertaken a comprehensive program designed to provide appropriate signs designating the shore access points. It is recommended that they identify the existing access points in the Carlsbad coastal zone, and upon approval of the future sites of access it is recommended that these also be identified with signs.	*Potentially consistent - Highway.* New highway corridor signage would generally include changeable message signs and congestion pricing signage. Any new signage along the I-5 would be consistent with standard Caltrans design which is, and would remain consistent throughout the corridor. *Potentially consistent – Rail.* It is unknown if new signage will be needed along the LOSSAN rail corridor; signage that may be required for access, safety, or related purposes at crossings or grade separations would be consistent with existing rail signage in the City's coastal zone.
POLICY 7-6 BUENA VISTA LAGOON An access trail shall be provided along the southern shoreline of Buena Vista Lagoon (See Exhibit 4.10, Page 77), to facilitate public awareness of the natural habitat resources of the lagoon. To protect the sensitive resources of this area, access development shall be limited and designed in consultation with the State Department of Fish and Game. In permitted development of properties adjacent to the lagoon (See Exhibit 4.5, Page 75), offers of dedication of lateral accessways, irrevocable for a term of 21 years, shall be required to be provided to the City of Carlsbad, State Coastal Conservancy, or other appropriate public agencies. Such access dedications shall be of at least 25 feet in width upland from environmentally sensitive areas and any required buffers thereto. In addition, the City of Carlsbad, State Coastal Conservancy, and Wildlife Conservation Board shall seek to obtain lateral accessways across developed lands.	*Potentially consistent – Highway/Rail.* The TREP/PWP includes access trail improvements at Batiquitos and Agua Hedionda lagoons that would be located and designed to minimize potential impacts to ESHA. Proposed transportation and community enhancement improvements would not affect the City's ability to establish a new access trail at Buena Vista Lagoon, and could help facilitate this Policy.
POLICY 7-9 SOUTH CARLSBAD STATE BEACH: PARKING Parking facilities are entirely inadequate in the vicinity of the South Carlsbad State Beach. To remedy this problem, the 20-acre site (APN 210-09-7) located between Carlsbad Boulevard and the railroad at the junction of Palomar Airport Road shall be developed for parking facilities of approximately 1,500 spaces. When this facility becomes heavily utilized, jitney service should be initiated between the parking area and designated points along Carlsbad Boulevard.	*N/A – Highway/Rail.* The TREP/PWP would not adversely affect parking facilities for South Carlsbad State Beach.
POLICY 7-13 VISUAL ACCESS	*Potentially consistent – Highway.* The TREP/PWP would potentially infringe upon scenic

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Visual access over more than 80% of the Carlsbad coastline is unobstructed because of public ownership. No future public improvements which would obstruct this visual access shall be permitted.	views and vistas within the I-5 corridor. However, the project also includes opportunities to underground existing utilities where feasible, and providing new public park and trail linkages, thereby enhancing scenic views and vistas. In addition, view impacts to the corridor's most significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided. Application of sensitive site design and landscaping measures identified in the TREP/PWP would ensure compatibility with surrounding developed and open space areas within the City. *Potentially consistent – Rail.* Proposed rail improvements would be completed generally in existing rail right-of-way and would not adversely impact the City's views to the coastline.
SCENIC AND VISUAL RESOURCES, HISTORIC RESOURCES	
POLICY 8-1 SITE DEVELOPMENT REVIEW The Scenic Preservation Overlay Zone should be applied where necessary throughout the Carlsbad coastal zone to assure the maintenance of existing views and panoramas. Sites considered for development should undergo individual review to determine if the proposed development will obstruct views or otherwise damage the visual beauty of the area. The Planning Commission should enforce appropriate height limitations and see-through construction, as well as minimize any alterations to topography.	*Potentially consistent – Highway/Rail.* See discussion under Policy 7-13, above.
POLICY 8-4 ARCHAEOLOGICAL AND PALEONTOLOGICAL RESOURCES The environmental impact review process will determine where development will adversely affect archaeological and paleontological resources. A site-specific review should also determine the most appropriate methods for mitigating these effects. Most importantly, the City of Carlsbad should require the implementation of these measures.	*Potentially consistent - Highway.* Based on analysis included in the I-5 draft EIR/EIS, the project would not result in significant impacts to archaeological or paleontological resources. A number of archaeological sites that initially were within the project's area of potential effect for cultural resources fell out as the project was redesigned to avoid these areas. Only two archaeological sites have been identified that could potentially be adversely affected by the project due to soundwall construction should they be built. Proposed wall locations would impact only a small

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	portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources. *Potentially consistent – Rail.* Site-specific archaeological and paleontological studies would be completed and appropriate mitigation measures, such as avoidance, monitoring or cap and cover, identified and incorporated prior to development.
WEST BATIQUITOS LAGOON/SAMMIS PROPERTIES LAND USE SEGMENT	
A. LAND USE CATEGORIES	
18. West Batiquitos Lagoon Public Resources Code Section 30233(c) identifies Batiquitos Lagoon as one of 19 priority wetlands and limits the types of uses and activity that may occur there. This area is Open Space (O-S) in order to preserve the function of the lagoon and the immediately adjacent uplands as a viable wetland ecosystem and habitat for resident and migratory wildlife. Uses shall be limited to activities related to habitat enhancement, educational and scientific nature study, passive recreation which will have no significant adverse impacts on habitat values, and aquaculture having no significant adverse effect on natural processes or scenic quality.	*Potentially inconsistent – Highway/Rail.* The TREP/PWP transportation improvements would include encroachments potentially resulting in direct impacts to West Batiquitos Lagoon. The proposed improvements are not consistent with permitted uses for wetland fill per this policy. However, the TREP/PWP provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor.
B. AGRICULTURAL LANDS	*N/A*
C. GRADING AND EROSION CONTROL	
a. Because the area is located close to environmentally sensitive habitats, all development must include mitigation measures for the control of urban runoff flow rates and velocities, urban pollutants, erosion and sedimentation in accordance with the requirements of the City's Grading Ordinance, Storm Water Ordinance, Standard Urban Storm Water Mitigation Plan (SUSMP), Master Drainage Plan, and the following additional requirements. The SUSMP, dated April 2003 and as amended, and the Master Drainage Plan (1994) are hereby incorporated in the LCP by reference. Development must comply with the requirements of the Jurisdictional Urban Runoff Management Program (JURMP) and	*Potentially inconsistent - Highway.* The TREP/PWP would minimize potential impacts to ground, surface and ocean water quality during all phases and would potentially enhance long-term water quality in the corridor. The highway improvements would include BMPs to address short term potential impacts to water quality during the

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the San Diego County Hydrology Manual to the extent that these requirements are not inconsistent with any policies of the LCP. b. Drainage and runoff shall be controlled so as not to exceed the capacity of the downstream drainage facilities or to produce erosive velocities and appropriate measures shall be taken on and/or off the site to prevent the siltation of the Batiquitos Lagoon and other environmentally sensitive areas. c. All graded areas shall be hydroseeded prior to October 1st with either temporary or permanent materials. Landscaping shall be maintained and replanted if not established by December 1st. d. Grading plans shall indicate staking or fencing of open space areas during construction and shall specifically prohibit running or parking earth-moving equipment, stockpiling or earthwork material, or other disturbances within the open space areas. e. Any necessary temporary or permanent erosion control devices required for the development of a specific planning area, such as desilting basins, shall be developed and installed prior to any on, or off, site grading activities within the specific planning area requiring the mitigation, or, concurrent with the grading, provided all devices required for that planning area are installed and operating prior to October 1st, and installation is assured through bonding or other acceptable means. f. The developer must provide for the long-term maintenance of drainage improvements and erosion control devices. g. – u. – *See MELLO I SEGMENT STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above*. Note: The Poinsettia Shores Master Plan provides additional specific standards which relate to grading - see standards for individual planning areas and the Master Plan Grading and Earthwork Chapter.	construction phase and long term potential impacts during facility operation and maintenance. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby minimize erosion and potentially enhancing water quality throughout the corridor. However, additional analysis is necessary to determine if the highway improvements would be designed consistent with the specific development standards of this policy including design to meet, infiltrate, filter or treat the runoff produced from each storm event up to and including the 85th percentile 24-hour storm event. *Potentially inconsistent - Rail.* Specific rail improvement design is unavailable to determine whether it meets the specific development standards of this policy. Specific rail improvement design is unavailable to determine consistency with this policy. Site-specific studies and any potential for impacts or required mitigation measures would be evaluated for consistency with this policy to provide guidance in determining Coastal Act consistency during project-specific review, as applicable.
D. LANDSCAPING	
In order to guard against introduction of any species which are inherently noxious to, or incompatible with, the adjacent lagoon habitat, drought tolerant plants and native vegetation shall be used to the maximum extent feasible. Landscaping adjacent to structures should provide an effective screen of urban development. Note: The Poinsettia Shores Master Plan provides additional specific standards which relate to landscaping - see standards for individual planning areas and the Master Plan Theme Elements Chapter.	*Potentially consistent - Highway.* The TREP/PWP would include measures to landscape the I-5 highway corridor improvements to screen and soften views of the facility and blend with the surrounding environment, including sound wall planting pockets, terraced retaining walls, and viaduct retaining walls, all of which would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover and, in less

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	developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *Potentially consistent – Rail.* The design and development strategies fro rail projects generally include providing landscape treatments such as trees, shrubs, and groundcover along the edge of the ROW to provide partial screening and to visually integrate the ROW into surrounding areas, and implementing native revegetation efforts for areas disturbed by grading activities. Landscaping details would be determined as part of project-specific analyses.
E. ENVIRONMENTALLY SENSITIVE HABITATS	
The environmentally sensitive habitats located on the affected area (i.e., wetlands and bluff slopes) shall be preserved as open space. These sensitive areas are protected from any significant disruption through fee dedication of wetland areas and recordation of open space easements. The dedication of the designated wetland areas has been completed and accepted by the California Coastal Conservancy. Recordation of several open space easements has occurred with the existing development along the blufftop in the area identified as Planning Area J. Recordation of additional open space easements along the bluff and railroad right-of-way shall occur upon recordation of the final maps for Planning Areas A-3 and A-4, G and H. Furthermore, development on the blufftops shall maintain setbacks as identified in the Poinsettia Shore Master Plan from the bluff edges to prevent possible impacts on adjacent environmentally sensitive habitats. No grading or manufactured slopes associated with the adjacent private residential developments shall occur within the public open space and setback areas. Any future restoration, enhancement and preservation of Batiquitos Lagoon shall be consistent with a Batiquitos Lagoon Enhancement Plan. The Batiquitos Lagoon Enhancement Plan has been adopted by the City of Carlsbad and certified by the California Coastal Commission. This plan is currently included as an attachment to the Carlsbad Local Coastal Program. Any other lagoon enhancement plans must also be approved by the City of Carlsbad and certified by the California Coastal Commission in conformance with the California Coastal Act.	*Potentially consistent – Highway/ Rail.* The proposed transportation improvements would potentially encroach into wetlands and ESHA; however, the TREP/PWP is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. All habitat restoration plans would be consistent with a Batiquitos Lagoon Enhancement Plan, as applicable.
F. PUBLIC ACCESS	
	Potentially consistent – Highway/Rail. The

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A pedestrian walkway shall be provided along the western portion of areas G and H from approximately Avenida Encinas on the north to the San Marcos Creek Bridge on the south. The walkway shall be permanently open to use by the public. Lagoon accessways, blufftop accessways or equivalent overlook areas, and a bike path/pedestrian walkway, shall be provided if agricultural land on the north shore of Batiquitos Lagoon is developed. Each planning area containing a segment of the trail shall be conditioned to require construction and maintenance of that portion of the trail within the planning area, unless otherwise specified in the Batiquitos Lagoon Enhancement Plan. Each planning area containing a segment of the trail shall be conditioned to construct its trail segment prior to issuance of any building permits for that planning area. Such accessways shall be preserved for public use by requiring irrevocable offers of dedication of those areas as a condition of development and, prior to the issuance of any building permits for those planning areas, the trail dedications shall be accepted by the City of Carlsbad if the City agrees and it adopts a Citywide Trails Program that includes provisions for maintenance and liability. Otherwise, prior to the issuance of any building permits, the obligation for acceptance, construction, maintenance, and liability shall be the responsibility of another agency designated by the City or the responsibility of the Homeowners Association. Upon acceptance of the dedication, including maintenance and liability responsibilities, and completion of the trail improvements, the trail shall be open for public use. The accessways shall not adversely impact environmentally sensitive habitats. A Trail Construction Plan shall be provided for all planning areas containing public trails. The public trails alignment shall be as shown on the attached exhibit. The plan shall indicate that all trail alignments will be atop of the lagoon or railroad slopes and shall be constructed in the least environmentally-damaging manner. The public trail shall be a minimum width of ten feet measured inland from the top of the bluff edge or railroad embankment. The trail improvements shall include a minimum 5 foot wide improved accessway, fencing, trash receptacles and interpretive signage. In addition to the existing trailhead at Windrose Circle, two additional trailheads shall be provided: one at the southwest corner of Planning Area A-4 adjacent to the railroad right-of-way and one at the northwest corner of Planning Area A-3, adjacent to Avenida Encinas. These trailheads shall include appropriate directional signage and identification. The plan shall also include construction specifications, maintenance standards, and specify what party(ies) shall assume maintenance and liability responsibilities. The public facilities and improvements specified by the Poinsettia Shores Master Plan shall be provided by the developer - see the Public Facilities and Open Space Chapters of the Master Plan.	TREP/PWP includes various trail and bicycle improvements that would greatly enhance pedestrian and bicycle circulation opportunities within the City and to the coast. Access opportunities would be located and constructed consistent with the resource protection policies of the LCP.
G. ARCHAEOLOGY	
A program of preservation and/or impact mitigation regarding archaeological sites located on the affected area shall be completed prior to any development.	*Potentially consistent – Highway.* Based on analysis included in the I-5 draft EIR/EIS, the project would not result in significant impacts to archaeological or paleontological resources. A number of archaeological sites that initially were within the highway corridor's area of potential effect

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	for cultural resources fell out as the project was redesigned to avoid these areas. Only two archaeological sites have been identified that could potentially be adversely affected by the project due to soundwall construction should they be built. Proposed wall locations would impact only a small portion of each site, and those impacts would occur at site peripheries where previous disturbances at both locations have occurred, and have somewhat compromised the integrity of the deposits. Standard monitoring and data recovery measure would be implemented to ensure the project does not result in adverse impacts to cultural resources. *Potentially consistent – Rail.* Site-specific archaeological and paleontological studies would be completed and appropriate mitigation measures, such as avoidance, monitoring or cap and cover, identified and incorporated prior to development.
H. STATE LANDS COMMISSION REVIEW	
Prior to issuance of a coastal development permit, the permittee shall obtain a written determination from the State Lands Commission that: 1. No State Lands are involved in the development, or 2. State Lands are involved in the development and all permits required by the State Lands Commission have been obtained, or 3. State Lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.	*Potentially consistent – Highway/Rail.* If required, highway or rail improvements and community enhancement projects located in the plan area would obtain a determination from the State Lands Commission.
I. MASTER PLAN APPROVAL	
The Poinsettia Shores Master Plan as adopted by the Carlsbad City Council Ordinance No. NS-266 and certified by the California Coastal Commission is approved as the Implementing Ordinance for this Local Coastal Land Use Plan. Upon final certification by the California Coastal Commission, this portion of the Carlsbad Local Coastal Program shall be deemed certified.	*N/A - Highway/Rail.* The TREP/PWP would have no affect on the Poinsettia Shores Master Plan.

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EAST BATIQUITOS LAGOON/HUNT PROPERTIES	
B. LAND USE POLICIES	
1. Land Use Categories Sub-areas (see map in back of document) (1) North Shore Batiquitos Lagoon (outside the wetland boundary). All non-agricultural land use and development is subject to the provisions of the Pacific Rim Master Plan as adopted by Carlsbad City Council and as approved or modified by the California Coastal Commission. No development inconsistent with the Master Plan shall be permitted. To the extent that there are inconsistencies between the Master Plan and this LCP the most restrictive requirements shall prevail. It is understood that Sub-Area No. 1 is part of a larger holding on the north shore owned by Hunt Properties or its successors in interest. These other contiguous properties are included in the Mello I and Mello II segments of the Carlsbad LCP. All contiguous north shore properties including the lagoon which are owned by Hunt Properties or its successors shall be the subject of a single master plan. (a) Land Uses Permitted Pursuant to a Master Plan Unless otherwise noted herein, uses permitted by the Master Plan shall be consistent with those allowed by the Carlsbad General Plan as adopted as of March 1, 1988. In general, the Master Plan and Carlsbad General Plan allow for a combination of residential, commercial, and open space uses. Specifically, the uses shall be as follows: 1) Residential - the Mesa (Planning Area 30) shall be designated Residential Medium Density (RM 4-8 du/ac) but constraints to development permit a maximum of 135 du. All other residential areas subject to this LCP segment are designated Residential Low-Medium density (RLM 0-4 du/ac). 2) Commercial - Portions of Planning Areas 10 and 11 that are subject to this plan are designated Recreation Commercial (RC). In addition to the uses permitted under this designation, other uses may include restaurants. 3) Open Space - Portions of Planning Area 1, 1A, and 1B are designated Open Space (OS). In addition to uses permitted under this designation, other uses may include public and/or private golf course plus accessory uses such as clubhouse facilities. Uses in this open space area shall be designated so that there will be no significant adverse impacts on environmentally sensitive habitats. Also designated for open space is the lagoon wetland and a buffer (transition habitat Planning Areas 31A and 31B). The only uses allowed within the wetland shall be consistent with Section 30233 (Public Resources Code - See discussion in Policy C-1 below). The only uses allowed within the wetland buffer is lateral public access trail system, including signing and fencing as required consistent with the Batiquitos Lagoon Enhancement Plan prepared by the California Coastal Conservancy and/or	*Potentially inconsistent - Highway.* The I-5 NCC improvements would include encroachments potentially resulting in direct impacts to East Batiquitos Lagoon. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. The TREP/PWP provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland/upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. *N/A – Rail*. Rail improvements would not be located in this plan area.

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as approved by the Coastal Commission in Coastal Development Permit No. 6-87-680. The trail shall be designed so as to, maintain and preserve sensitive wetland areas from disturbance, encroachment, human or domestic pet interference. (2) Batiquitos Lagoon The lagoon wetland area as determined by California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (FWS) is designated Open Space (OS) with a Special Treatment Area Overlay. The general boundaries are shown on Exhibit . The precise wetland boundaries as determined by the above agencies are depicted on a map on file in the Carlsbad Planning Department. (3) Green Valley (approximately 280 acres) The area south of La Costa Avenue and west of El Camino Real is designated for a combination of uses as follows: (a) Riparian corridor of Encinitas Creek (approximately 40 acres) designated Open Space (OS) with a Special Treatment Overlay. (1) Steep Slopes - Slopes 40% or greater are designated Open Space (OS) and constrained from development. Slopes 25% to 40% may also be constrained from development. (See Grading Section.) (b) Upland (approximately 240 acres) is designated for a combination of Residential (Medium High Density - RMH - 9-15 du/ac), Commercial (C), and Office (O) uses. The maximum height of new development shall be limited to 35 feet consistent with the Carlsbad Municipal Code. Additionally, the intensity of development shall be compatible with the currently planned road capacities of La Costa Avenue and El Camino Real. Approval of these land uses shall not be considered precedent for increasing the road capacity of these two corridors. Development of the entire 280 acres of Green Valley shall be pursuant to a Master Plan which is consistent with the uses allowed by the Carlsbad General Plan adopted as of March 1, 1988.	
2. AGRICULTURE/PLANNED DEVELOPMENT	
Prior to the approval (by Carlsbad and the Coastal Commission or its successor) of a master plan for either Sub-area No. 1 (Northshore) or Sub-area No. 3 (Green Valley) the uses permitted on either Sub-area shall be consistent with those allowed by the Mello II LCP Segment Policy 2-1C (Permitted Uses on Agricultural Lands). Conversion of these non-prime agricultural lands to urban uses pursuant to the approved master plan(s) shall be consistent with the Coastal Act Section 30171.5 (Public Resources Code) which requires a mitigation fee. Development pursuant to the approved master plan(s) shall be consistent with the provisions of the Carlsbad Planned Community Zone with the additional requirement that all development as defined by the Coastal Act shall require	*Potentially consistent - Highway.* The proposed highway improvements will not impact agricultural lands within this plan area. However, impacts to agricultural lands located south of Agua Hedionda Lagoon (outside of this LCP segment) would occur. The proposed encroachments would not preclude continued agricultural activities on the affected sites and the affected areas are designated for recreation and tourist uses and are not specifically identified

LCP SEGMENT	PRELIMINARY CONSISTENCY REVIEW
approval of a Coastal Development Permit.	as supporting long-term agricultural activity. *N/A – Rail*. Rail improvements would not be located in this plan area.
3. ENVIRONMENTALLY SENSITIVE HABITATS	
The environmentally sensitive habitats (wetlands, riparian areas, and areas greater than 25% slope) shall be preserved as open space with the following additional requirements: (1) Batiquitos Lagoon Special Treatment Overlay - The wetlands as defined and determined by CDFG and FWS shall be constrained from development. Pursuant to Section 30233(C) (Public Resources Code) any alteration of the wetlands shall be limited to minor incidental public facilities, restorative measures, and nature studies. Furthermore, any alteration of the wetlands must be approved by the City of Carlsbad and the Coastal Commission. The latter because it will retain Coastal Development Permit jurisdiction. In addition, any wetland alteration will require federal approval through an Army Corps of Engineers (COE) permit. (2) Wetlands Buffer - The lagoon Special Treatment Overlay shall include a buffer area outside the wetlands boundary as mapped by CDFG and FWS. The buffer shall be of sufficient width (minimum 100 feet unless approved by the Coastal Commission or its successor as part of a Coastal Development Permit) so as to provide a transition habitat as well as provide a protective area to reduce possible disruptive impacts to the lagoon's wildlife and habitats. No development shall occur within the wetlands buffer except for the lateral public access trail described in Policy A1C above. (3) Green Valley Riparian Corridor - The riparian corridor (approximately 40 acres) shall be constrained from all development. In addition, a 50 foot wide buffer area shall be preserved in open space upland of the boundaries of the riparian corridor. Unless otherwise specified herein, development within the buffer area shall be limited to the construction of a pedestrian path with fencing and other improvements deemed necessary to protect the riparian habitat in the upper (upland) half of the buffer area. Any alteration of the riparian corridor shall be limited to the following and shall require Carlsbad approval, a Coastal Development Permit, Stream Alteration Agreement, and COEP permit: (a) Access - A maximum of two (2) crossings shall be permitted to provide access to the developable portions of Green Valley. The access crossings shall be designed to minimize adverse impacts to the habitat value of the riparian corridor and shall be mitigated by the creation of and maintenance of new riparian habitat at a ratio of 3 construction of the accessways. All mitigation required shall be located onsite and contiguous with the existing riparian corridor. (b) Flood and sediment control projects - shall be allowed adjacent to the riparian corridor provided such projects do not involve any removal of riparian habitat or diversion of non-flood water flows upon which the habitat is	*Potentially inconsistent - Highway.* The I-5 NCC improvements would include facility encroachments potentially resulting in direct impacts to wetlands and ESHA and, as the existing location and orientation of the I-5 corridor requires that improvements occur in areas containing wetlands and riparian habitat, the standard minimum buffers recommended by this policy would not be met. However, the project is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland/upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. All habitat restoration plans for Batiquitos Lagoon would be consistent with a Batiquitos Lagoon Enhancement Plan. *N/A – Rail*. Rail improvements would not be located in this plan area.

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dependent provided there are no less environmentally damaging feasible alternatives and/or public health, safety, and welfare or protection of the lagoon is found to be a mutually exclusive higher priority. (4) Steep Slopes - Slopes 40% or greater shall be constrained from development. Slopes 25% to 40% may be constrained from development. (See Grading and Erosion Control below.) The above environmentally sensitive areas shall be protected from any significant disruptive impacts through fee dedication of the wetlands and recordation of open space easements over the lagoon buffer and riparian corridor and recordation of open space deed restrictions over the riparian corridor buffer and constrained steep slopes. For the wetlands of Batiquitos Lagoon and the upland 100 foot wide buffer area and designated steep slope areas constrained from development north of the lagoon, recordation of such open space easements and recordation of open space deed restrictions shall be required as conditions of approval of the Pacific Rim Master Plan. For the environmentally sensitive areas of Green Valley, recordation of an open space easement over the riparian corridor and recordations of open space deed restrictions over the riparian buffer area and steep slope areas constrained from development shall be required as conditions of development at the time of review of the required Master Plan for the area under the coastal development permit process.	
4. GRADING, DRAINAGE AND EROSION CONTROL	
(1) Batiquitos Lagoon is the primary coastal resource within the subject area and warrants stringent controls on upstream development activities. Downstream impacts of possible erosion and sedimentation due to development must be limited to insignificant levels. Many slope areas on the property contain sensitive vegetation and support a variety of wildlife species. Slope areas also pose possible geologic hazards and require close development review. (2) Any development proposal that affects slopes 25% inclination or greater, shall be required to prepare a slope map and analysis for the affected slopes. The slope mapping and analysis shall be prepared during the CEQA environmental review on a project-by-project as is and shall be required as a condition of a coastal development permit. (3) Under the Master Plan requirements, any development shall conform to the following additional standards: (a) – (e) – *See MELLO I SEGMENT RANCHO LA COSTA (HUNT PROPERTY) Policy 3 Drainage and Erosion Control above.* (f) Mitigation measures tailored to project impacts and consistent with the control of cumulative development shall be implemented prior to development in accordance with the following additional criteria: 1) Submittal of a runoff control plan designated by a licensed engineer qualified in hydrology and hydraulics, which would assure no increase in peak runoff rate from the developed site over the greatest discharge expected from the existing undeveloped site as a result of a 10-year frequency storm. Runoff control shall be accomplished	*Potentially inconsistent - Highway.* The TREP/PWP highway improvements involve construction on slopes exceeding 25%; however, this policy provides an exception for construction of roads or the City's Circulation Element or the development of utility systems. I-5 NCC project soils and geotechnical studies prepared for the draft EIR/EIS document conclude the project will not adversely affect hillside or soil stability. The proposed improvements would minimize potential impacts to ground, surface and ocean water quality during all phases and would potentially enhance long-term water quality in the corridor. BMPs are included to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/minimized through the use of Construction site BMPs while the long term potential impacts during the facility

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by a variety of measures, including, but not limited to, onsite catchment basins, detention basins, siltation traps, and energy dissipators and shall not be concentrated in one area or a few locations. 2) Detailed maintenance arrangements and various alternatives for providing the ongoing repair and maintenance of any approved drainage and erosion control facilities. 3) All permanent runoff and erosion control devices shall be developed and installed prior to or concurrent with any onsite grading activities. 4) All areas disturbed by grading, but not completed during the construction period, including graded pads, shall be planted and stabilized prior to October 1st with temporary or permanent (in the case of finished slopes) erosion control measures and native vegetation. The use of temporary erosion control measures, such as berms, interceptor ditches, sandbagging, filtered inlets, debris basins, and silt traps shall be utilized in conjunction with plantings to minimize soil loss from the construction site. Said plantings shall be accomplished under the supervision of a licensed landscape architect and shall consist of seeding, mulching, fertilization, and irrigation adequate to provide 90% coverage within 90 days. Planting shall be repeated, if the required level of coverage is not established. This requirement shall apply to all disturbed soils, including stockpiles. 5) – 20) - *See MELLO I SEGMENT STANDARD PACIFIC (Aviara) Policy 3 - Drainage, Erosion Control above*	operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs, Treatment BMPs and Maintenance BMPs. Project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. Additional analysis is necessary to determine if the project would be designed consistent with the specific development standards of this policy including design to assure no increase in peak runoff rate from the developed site over the greatest discharge expected from the existing undeveloped site as a result of a 10-year frequency storm. *N/A - Rail.* Rail improvements would not be located in this plan area.
5. LANDSCAPING	
See WEST BATIQUITOS LAGOON/SAMMIS PROPERTIES LAND USE SEGMENT Policy D. Landscaping above.	*Potentially consistent – Highway*. See discussion under West Batiquitos Lagoon/ Sammis Properties, Landscaping, above. *N/A – Rail*. Rail improvements would not be located in this plan area.
6. SCENIC AND VISUAL QUALITIES	
The scenic and visual qualities of the area are of great value to the region. Again, the focal point for these qualities is Batiquitos Lagoon. The viewshed to the lagoon and from the lagoon shoreline are important resources. Many of the requirements previously established by this document address visual quality components, such as: - setbacks; - preservation of slope areas; - preservation of lagoon and riparian habitats; - enhancement of the lagoon environments; and - controlled grading.	*Potentially consistent - Highway.* The TREP/PWP is designed to preserve views to the Lagoon to the maximum extent feasible and would not result in significant adverse impacts to the lagoon viewshed. The project has been designed to retain significant natural features where feasible; however, various improvements would result in removal of existing vegetation and grading of existing landforms, and construction of new retaining walls and soundwalls that could block existing views of natural features such as

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(1) In addition to these provisions, the following shall be provided to further address the important scenic and visual character of the area: (a) La Costa Avenue should be established as a scenic corridor pursuant to the City of Carlsbad General Plan Scenic Highway Element. (b) Scenic corridor status shall be pursued for any public roadway to be established along a part or the entire lagoon north shore. (c) Existing, mature, healthy vegetation such as eucalyptus stands, shall be preserved where possible. (d) Offsite signing along public roadways shall be prohibited. (e) If a Master Plan is pursued for the property, the provisions of the City of Carlsbad Scenic Preservation Overlay Zone should be utilized where appropriate. (f) View points shall be established along the north and south shore areas (if and where environmentally sound and physically possible) to provide varied visual access to the lagoon. (g) View points should offer a mix of accessibility for pedestrian, bicycle, and motor vehicles.	landscaping, trees, and topography (berms, hills, etc.). Design measures would be implemented to minimize view impacts to natural features and visual resources, including architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, including various methods of landscape screening of facility improvements. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks where feasible. *N/A – Rail*. Rail improvements would not be located in this plan area.
7. PUBLIC ACCESS	
La Costa Avenue is designated a major arterial providing coastal access from inland areas to the east. Construction of La Costa Avenue to major arterial standards shall be designed so as to limit environmental impacts including a limit of maximum of four traffic lanes, with a median, and pedestrian walkways/sidewalks on only the south side of the roadway. Any road construction that involves wetlands impacts shall require a coastal development permit issued by the Coastal Commission. Wetlands impact mitigation shall be a condition of the permit. A public access trail system along the north shore of Batiquitos Lagoon with adequate trailhead public parking areas shall be required as a condition of approval for any development along the north shore pursuant to the Pacific Rim Master Plan. The trail shall be conveyed to an appropriate agency or non-profit organization (subject to Carlsbad approval) through a recorded public access easement. Public access along the south shore shall be provided as part of La Costa Avenue improvements. Access shall include but not be limited to a pedestrian walkway and bicycle lane along the entire south shore length covered by this LCP segment. Lagoon accessways and overlook areas along the north shore shall be provided. The responsibility for construction and	*Potentially consistent - Highway.* The TREP/PWP would enhance public access opportunities by improving pedestrian access to the Lagoon area and shoreline via pedestrian/bicycle crossings and trails. In addition to the reconfigured interchanges, overpasses, and underpasses (all of which would be constructed with pedestrian and bicycle facilities), the proposed community enhancement features would greatly increase connectivity between neighborhoods east and west of I-5. The project includes improvements such that nearly all local city streets and regional roadways that cross I-5 and link up to Highway 101 would be bicycle-friendly, meaning that Class II Bicycle Lanes would have been painted on the shoulders and Class III Bicycle Routes signed to accommodate users to the Pacific Coast "Bike"- Centennial

LCP SEGMENT	PRELIMINARY CONSISTENCY REVIEW
maintenance of such facilities shall be with the developer as a condition of any permit approval unless otherwise specified in the Batiquitos Lagoon Enhancement Plan (on file with the City of Carlsbad) and/or as approved by the Coastal Commission in Coastal Development Permit No. 6-87-680. Such accessways shall be preserved for public use by requiring appropriate offers of entitlement of those areas as a condition of the implementation of the Batiquitos Lagoon Enhancement Plan. The accessways shall not adversely impact environmentally sensitive habitats.	Bicycle Route that extends between Oregon and the International Border at Mexico. *N/A – Rail*. Rail improvements would not be located in this plan area.
8. STATE LANDS COMMISSION REVIEW	
(1) Prior to issuance of a coastal development permit, permittee shall obtain a written determination from the State Lands Commission that: (a) No State lands are involved in the development, or (b) State lands are involved in the development and all permits required by the State Lands Commission have been obtained, or (c) State land may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.	*Potentially consistent – Highway.* If required, highway corridor improvements and community enhancement projects located in the plan area would obtain a determination from the State Lands Commission. *N/A – Rail*. Rail improvements would not be located in this plan area.
VILLAGE REDEVELOPMENT AREA	
1. VILLAGE GOALS AND OBJECTIVES	
Objective 1.4 Encourage uses which are complementary to the new rail station.	*Potentially consistent – Highway/Rail.* The proposed transportation improvements would improve accessibility to the transportation system for City residents by reducing congestion and increasing carpooling and public transit capacity along I-5, encouraging alternative modes of public transportation through rail improvements along the LOSSAN rail corridor, and by providing multi-modal linkages for pedestrian and bicycle circulation.
GOAL 2: Improve the Pedestrian and Vehicular Circulation in the Village Area.	*Potentially consistent – Highway/Rail.* The TREP/PWP's main purpose is to maintain or improve the existing and future traffic multi-modal transportation needs and operations in the I-5 highway and LOSSAN rail corridors in order to improve the safe and efficient regional and community movement of people and goods. Highway improvements would provide designated

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	Managed Lanes that include High Occupancy Vehicle (HOV) use that serve public buses. The proposed project also includes other multi-modal improvements, such as improved bicycle and pedestrian facilities and routes that connect with public transit centers, thereby promoting carpooling, and is compatible with Bus Rapid Transit. In addition, rail improvements would encourage alternative modes of public transportation,
Objective 2.6 Promote use of rail transit and other modes of public transportation to improve vehicular and pedestrian circulation throughout the Village.	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP would improve the transportation corridors accessing the Village. In addition, proposed improvements to pedestrian-oriented facilities, and new or improved corridor bike and hiking trails will provide safe, non-automobile dependent routes to and from the Village.
Objective 4.1 Reinforce the Village character with appropriate site planning, architectural design and signage guidelines and standards.	*Potentially consistent – Highway/Rail.* The proposed TREP/PWP would improve the transportation corridors accessing the Village while protecting and enhancing community character with sensitive design and community enhancement features.
Objective 4.3 Minimize the land area required to accommodate additional parking in the Village, anticipating the need for structured parking.	*Potentially consistent – Highway/Rail.* The TREP/PWP transportation improvements are designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facilities. The proposed new parking structure at the Village Station would meet the intent of this objective.
Objective 4.5 Require design sensitivity to surrounding development within the area.	*Potentially consistent – Highway/Rail.* The TREP/PWP is designed to minimize impacts to surrounding development, and to take advantage of new opportunities to enhance land uses by creating and improving facilities for multi-modal transportation uses including rail, pedestrian and bicycle use.

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GOAL 5: Provide signage which is supportive of commercial vitality and a unique Village image.	*N/A- Highway.* New facility signage, such as changeable message signs and congestion pricing signage on the highway within the I-5 corridor would not be located within the Village Redevelopment Area. *Potentially consistent - Rail.* It is unknown whether signs are proposed as part of rail double-tracking or for new station parking, which may require signage for safety purposes. Signage plans would be prepared and approved prior to development.
Objective 5.1 Reinforce the positive image of Carlsbad Village with appropriately designed and scaled signage.	See discussion under Goal 5, above.
Objective 5.3 Encourage pedestrian-oriented signs.	See discussion under Goal 5, above.
2. LAND USES	
Transportation Corridor Portions of Land Use District 1, 4, and 6 which are located within the Village Redevelopment Area are also located within the Transportation Corridor. Notwithstanding the previous land use charts and the Carlsbad Municipal Code, for those properties which are located both within the Village Redevelopment Area <u>and</u> the Transportation Corridor, the following land uses are the only uses which will be <u>permitted:</u> Field and Seed Crops; Truck Crops; Horticulture Crops; Orchards and Vineyards; Tree Farms; Fallow Lands; Light-Rail Transmission Facilities; Light-Rail Maintenance/Repair Facilities; Light-Rail Stations; Passive Open Space; Bicycle Paths; Pedestrian Trails; Private or Public Parking Lots; and Railroad Tracks. Any other use, including commercial and retail businesses, mixed use projects or residential projects, shall not be permitted without the completion of a Master Plan for the Transportation Corridor which would need to be reviewed and approved by the California Coastal Commission as a Local Coastal Program Amendment.	*N/A – Highway*. The proposed I-5 improvements would have no affect on land uses within the Village Redevelopment Area Transportation Corridor. *Potentially consistent – Rail.* The proposed rail improvements, including new Carlsbad Village parking structure, are specifically permitted within the Transportation Corridor.
5. SIGNAGE	
Village Signs	*N/A- Highway.* New facility signage, such as changeable message signs and congestion pricing

LCP SEGMENT	PRELIMINARY CONSISTENCY REVIEW
• Signs are expected to support the Village's image as a high quality specialty shopping district and business location. • Sign sizes, shapes and colors will be reflective of the lower traffic speeds and pedestrian orientation of the Village. • Public sector signs will also be unique to the Village location and visual character. • Creative and interesting signs will be encouraged. • Businesses will be given a variety of options in meeting their signage needs.	signage on the highway within the I-5 corridor would not be located within the Village Redevelopment Area. *Potentially consistent - Rail.* It is unknown whether signs are proposed as part of rail double-tracking or for new station parking, which may require signage for safety purposes. Signage plans would be prepared and approved prior to development.
The following signs shall be prohibited within the Village Redevelopment Area: • Interior Illuminated Boxed Display Signs (which are designed to be mounted on the exterior of a building). • Changeable Letter Signs, except for marquee signs for cinemas or performing arts theatres. • Off-Premises signage (including billboard signs and signs which are not located directly in front of a related business). • Roof signs (which are signs placed on top of any building). • Pole Signs	See discussion above. The proposed new changeable message signage within the I-5 corridor would not be located within the Village Redevelopment Area boundaries.
6. PARKING	
Parking improvements within the Village Redevelopment Area shall reflect the following policies: 1. Improvements should enhance both real and perceived supply of parking. 2. Shared lot arrangements should be established or facilitated wherever possible. Most areas within the Village do not have a supply problem as much as a utility and distribution problem. 3. To minimize visual impacts and disruption of commercial frontages, new lots should be constructed off the main thoroughfares. They should be distributed throughout the Village, rather than concentrated in a single location. They should incorporate attractive design features and landscaping that complements the image of the Village. 4. Parking structures should be used when parking opportunities are constrained by land availability or negative impacts on adjacent commercial or residential fabric. If located on a thoroughfare, they should always include first floor commercial uses.	*N/A – Highway.* The proposed I-5 corridor improvements would have no affect on parking within the Village Redevelopment Area. *Potentially consistent – Rail.* The proposed new Carlsbad Village parking structure would include 300 additional spaces at the COASTER station, which meet the intent of the Village Redevelopment Area's parking policies. Specific design details are unknown, including whether provision for commercial use would be made on the first floor. Plans would be prepared and approved prior to development.

5. City of Oceanside

LCP POLICIES	PRELIMINARY CONSISTENCY REVIEW
COASTAL ACCESS	
Objective: Adequate access to and along the coast shall be provided and maintained	*Potentially consistent - Highway/Rail.* The NCC TREP/PWP's main purpose is to improve the existing and future traffic operations in the I-5 and LOSSAN north coast corridors, which would enhance coastal access by helping to reduce congestion and providing designated Managed Lanes that include High Occupancy Vehicle (HOV) use which would benefit public transit and families travelling to the coast to reach visitor-serving and recreation destinations. In addition, the project would enhance pedestrian circulation and bicycle opportunities to the coast. Similarly, the LOSSAN improvements would increase coastal and recreational accessibility through enhanced connections to existing bicycle and pedestrian networks and other new and existing facilities.
Policies:	
4. The City has adopted standards for the design, construction, maintenance and signing of existing and new accessways. Existing and new public accessways shall not be closed or converted to other uses without approval from the California Coastal Commission.	*Potentially consistent - Highway/Rail.* The project does not include improvements that would result in closure or conversion of public accessways, but would enhance pedestrian circulation and bicycle opportunities to the coast. The project proposes bicycle and pedestrian facility improvements and routes that connect with public transit centers, thereby promoting multi-modal transit options. The project also includes bicycle-friendly improvements to many local city streets and regional roadways that cross I-5, meaning that Class II Bicycle Lanes would have been painted on the shoulders and Class III Bicycle Routes signed to accommodate users to the Pacific Coast "Bike"- Centennial Bicycle Route that extends between Oregon and the International Border at Mexico.
5. The City, in conjunction with the State Department of Fish and Game, shall continue its efforts to provide and maintain an adequate buffer zone between Buena Vista Lagoon and development along its shore. Such a buffer is necessary for the provision of public access and protection of the lagoon from adverse environmental impacts. The buffer zone shall be generally 100 feet in width as measured from the landward edge of the lagoon or existing riparian vegetation, whichever is more extensive. Within the buffer zone only passive recreation uses (such as walking, nature study, photography, small resource interpretive facilities and viewing areas) shall be allowed with no structures other than permitted by this policy and only very minor alteration of natural land forms or conditions for uses permitted by this policy.	*Potentially inconsistent - Highway/Rail.* The proposed project would result in minor development encroachments potentially resulting in direct impacts to the Buena Vista Lagoon. The current orientation of the I-5 and LOSSAN facilities require that the proposed project occur in areas within and adjacent to the Lagoon, especially where it crosses coastal lagoon systems. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor.

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	While the rail improvements would occur within the existing footprint of the existing rail bridge, which crosses Buena Vista Lagoon, the projects would not likely provide the standard minimum 100 foot wetland buffer recommended by this policy.
6. The Redevelopment Department shall develop plans for a pedestrian overpass from the Oceanside Transit Center over the railroad tracks to facilitate access for beach users.	*N/A – Highway/Rail.* No LOSSAN rail corridor pedestrian crossings are proposed. However, the proposed project would improve pedestrian access to the coast via new and enhanced pedestrian crossings and trail improvements at reconfigured I-5 interchanges, overpasses, and underpasses (all of which would be constructed with pedestrian and bicycle facilities).
7. The bike path along Highway 76 shall be extended under I-5 and the railroad track to the river mouth on the south side of the San Luis Rey River if and when funds are available to do so.	*Potentially consistent - Highway.* A new parking/trailhead staging area and trail improvements would support the existing San Luis Rey bike path and be located east of the intersection of I-5 and State Route 76. *Potentially inconsistent – Rail*. Specific rail improvement concerns/opportunities for the bike path are currently not known, but will be addressed at a project-specific level pending future design and environmental assessment. Rail improvements would not, however, preclude coastal access.
RECREATION & VISITOR SERVING FACILITIES	
Objective: The City shall provide and maintain a wide range of public recreation areas, beach support facilities, and visitor-serving facilities, commensurate with need.	*Potentially consistent - Highway/Rail.* The project proposes a number of recreational trail, park, and bicycle improvements intended to facilitate and compliment the City's trail system and support access to public recreation areas, beach support facilities, and visitor-serving facilities.
Policies:	
1. The City shall seek funding assistance from State, County and/or Federal sources for improvements to City beaches, since the majority of persons using Oceanside's beaches live outside the City.	*N/A – Highway/Rail.* The project does not include City beach improvements; however, public access to the City's coastal recreational use areas would be improved.
2. Priority beach improvement expenditures shall be for basic support facilities, such as restrooms, trash containers, parking and picnic tables.	*N/A – Highway/Rail.* The project does not include City beach improvements; however, public access to the City's coastal recreational use areas would be improved.
3. The City shall strive to evenly distribute beach usage by a system of directional signage and through allocation of support services.	*N/A – Highway/Rail.* The project does not include City beach improvements; however, public access to the City's coastal recreational use areas would be improved and appropriate access signage provided, where feasible.
6. Lower cost visitor and recreational facilities shall be protected, encouraged and, where possible, provided.	*Potentially consistent - Highway/Rail.* The NCC TREP/PWP's main purpose is to improve the existing and future traffic operations in the I-5 and LOSSAN north coast corridors, which would enhance coastal access and recreation by helping to reduce congestion and provide multi-modal transit options for residents and visitors travelling to coastal and inland recreational use areas. In addition, the project would enhance pedestrian circulation and bicycle trails that access

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	coastal resources, and would provide for new or enhanced pocket parks.
7. In granting approvals for new development within the Coastal Zone, the City shall give priority to visitor serving commercial recreation facilities over private residential, general industrial or general commercial uses.	*Potentially consistent - Highway/Rail.* See discussion under Recreation & Visitor Serving Facilities Policy 6, above.
10. The City shall continue to promote coastal tourism through the revitalization of the coastal area and upgrading of visitor amenities	*Potentially consistent - Highway/Rail.* See discussion under Recreation & Visitor Serving Facilities Policy 6, above.
12. If existing beach parking is removed for any reason, one-to-one replacement parking shall be provided west of the railroad tracks.	*Potentially consistent - Highway/Rail.* The project does not involve improvements that would affect beach parking. However, the project would provide additional parking at the Oceanside Transit Station to support increased rail use in the future as well as parking for beach access.
13. Efforts shall be made to provide additional public beach parking facilities to serve anticipated future demand. Priority should be given for new parking facilities to serve the following locations: a. Harbor Beach (some new parking recently completed) b. The beach area between Wisconsin and Witherby Streets c. In the Redevelopment Area at the following locations: (1) Ninth and Pacific Streets (2) Pocket parking at stub ends of Seventh and Eighth Streets (3) First Street and Strand (4) Pier and Strand (5) Wisconsin Street and Strand (6) Railroad and Third Street (7) Railroad and Tyson Street (Sixth Street?) (8) Railroad and Wisconsin Street	*Potentially consistent - Highway/Rail.* The project does not involve improvements that would affect beach parking. However, the project would provide additional parking at the Oceanside Transit Station to support increased rail use in the future as well as parking for beach access.
14. No new development on railroad right-of-way for any non-railroad operations purposes (other than public parking lots) shall occur until a Precise Plan for the area is approved by the Commission. Said plan shall include designation of parking areas in locations generally consistent with Land Use Plan Policy #13 and an implementation plan for the parking areas.	*N/A – Highway/Rail.* The project does not involve any non-railroad type improvements within the LOSSAN rail corridor right-of-way.
15. Because of high cost of land along the immediate shoreline, the City shall attempt to locate new parking facilities at lower-cost landward areas, and link those parking areas to the beach by pedestrian access, public transit, and beach area vehicular drop off points.	*Potentially consistent - Highway/Rail.* The project does not involve improvements that would affect beach parking but would facilitate shoreline access by providing increased parking resources at the Oceanside Transit Center, as well as bicycle and pedestrian facilities and routes that connect with the public transit centers, link neighborhoods and connect inland and coastal areas.
16. Since Oceanside beaches serve a recreational function for primarily non-local persons,	*Potentially consistent - Highway/Rail.* The project does not involve

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the City shall seek funding assistance from State or County agencies for acquisition and construction of new parking facilities.	improvements that would affect beach parking but would facilitate shoreline access through increased parking resources which would benefit public access to the coast and inland recreation use areas.
18. The City shall develop a contingency parking plan for the use of vacant lots and the railroad right-of-way during occasional peak overflows.	*Potentially consistent - Highway/Rail.* See discussion under Recreation & Visitor Serving Facilities Policy 15, above.
23. All beach lots shall be clearly signed and identified for public use.	*N/A – Highway/Rail.* The project does not involve new beach parking lots.
24. The City shall continue to work with the California Department of Transportation, North County Transit District and other affected agencies to improve alternatives to private automobile use, including public transit (bus or other means), bicycle and pedestrian travel, and multi-modal combinations (e.g., "park-n-ride", shuttle service).	*Potentially consistent - Highway/Rail.* The TREP/PWP's main purpose is to improve the existing and future traffic operations in the I-5 and LOSSAN north coast corridors, which would enhance public access to coastal and inland recreation use areas by reducing congestion and providing multi-modal transit options. The project would create and enhance features for an efficient and integrated transportation program by increasing carpooling and public transit capacity along the main transportation corridors within the City region, and by providing linkages for improved pedestrian and bicycle circulation. Similarly, the LOSSAN rail corridor improvements would improve reliability, reduce travel times, and provide a viable and attractive alternative to single occupancy vehicles.
WATER AND MARINE RESOURCES; DIKING, DREDGING, FILLING AND SHORELINE STRUCTURES; AND HAZARD AREAS	
Objectives: -The City shall work with the Regional Water Quality Control Board and other appropriate agencies to prevent degradation of Oceanside's coastal waters. -The City shall regulate diking, dredging, filling and erection of shoreline structures in order to minimize adverse environmental impacts, reduce public safety hazards, and where feasible, enhance public recreation opportunities. -The City shall seek to minimize risks to life and property in areas of high geologic and flood hazards.	*Potentially consistent - Highway.* The I-5 NCC highway project does not include new shoreline structures within the City. The proposed project would minimize risks to life and property in areas of high geologic hazards, assure project and site 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 shoreline protective devices that would substantially alter natural landforms along bluffs and cliffs. Furthermore, the project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The project would include Best Management Practices (BMPs) to address potential water quality impacts during the construction and operational phases of the project. Short term potential impacts to water quality during the construction phase would be prevented/minimized through the use of Construction site BMPs while the long term potential impacts during the facility operation and maintenance would be prevented/ minimized through the use of Design Pollution Prevention BMPs,

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	Treatment BMPs and Maintenance BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. While the I-5 NCC project is located in an area potentially subject to various geologic hazards, a Draft EIR/EIS was prepared that identifies appropriate mitigation measures to ensure geologic stability of the improvements. *Potentially consistent - Rail.* The LOSSAN rail improvements do not include new shoreline structures within the City. The proposed improvements would be designed and developed to avoid and minimize potential impacts associated with geologic hazards, unstable soils, seismicity, and topography. To avoid these risks, site-specific project design would be based on the results of detailed (design-level) engineering geologic and geotechnical studies and may include measures such as ground modification methods (soil densification) to prevent liquefaction, or structural design (e.g., deep foundations) to accommodate/ resist the liquefiable zones. Site and soil stability would further be addressed through developing and implementing Storm Water Pollution Prevention Plans (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit requirements. As the program improvements will be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would generally be sited to avoid construction on undisturbed, and potentially unstable steep topography. Other potential impacts associated with topography, excessive erosion and construction activities would be addressed with construction phase BMP requirements, which would minimize uncontrolled site runoff and erosion to ensure site stability.
Policies:	
1. As a supplement to the Hillside Development Manual and Ordinance, the City is reviewing the Grading Ordinance in order to minimize siltation of the San Luis Rey River, Loma Alta Creek and Buena Vista Lagoon. Such review will be based upon the results of studies by the recently formed Tri-Cities Buena Vista lagoon Joint Powers Committee and upon the following:	*Potentially consistent - Highway/Rail.* The NCC highway and rail projects have been designed to occur within existing transportation right-of-way (ROW) to minimize project grading and vegetation removal. The proposed project would also minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. See also discussion under the Water and Marine

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a. Fitting and new development to the topography and maximizing natural vegetative cover; b. Reducing the area and duration of exposed soils; c. Revegetating disturbed soils upon completion of grading; d. Designing final grades as close to natural drainage patterns as possible; and e. Incorporating silt basins or other measures to restrict siltation.	Resources Objectives, above.
2. As a part of the environmental review process, the City shall establish measures on a project-by-project basis to minimize the introduction of dissolved grease, oil, paints, pesticides, construction, waste, and other pollutants into the urban run-off.	*Potentially consistent - Highway/Rail.* See above discussion. A Draft EIR/EIS was prepared for the I-5 NCC highway project that includes an analysis of potential impacts and mitigation measures related to water quality. In addition, a Final Program EIR/EIS was released in 2007 for the LOSSAN rail corridor improvements that included an analysis of potential impacts and mitigation measures related to water quality.
4. The diking, dredging or filling of Oceanside's coastal waters shall be permitted where there are not less environmentally damaging alternatives, and where feasible, mitigation measures have been provided to minimize adverse environmental impacts, and shall be limited to the following: a. New or expanded port, energy, and coastal dependent facilities. b. Maintaining existing or restoring previous dredged depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps. c. In open coastal waters, other than wetlands, new or expanded boating facilities. d. Incidental public service purposes. e. Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. f. Restoration purposes. g. Nature study, aquaculture, or similar resource-dependent activities.	*Potentially inconsistent - Highway/Rail.* The proposed I-5 and LOSSAN rail corridor improvements would result in minor development encroachments that potentially result in direct impacts to coastal wetland areas within the City. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. Furthermore, implementation of the rail design and development strategies would ensure that specific rail facility projects would occur within the existing footprints of existing bridges across the corridor's waterbodies.
5. Dredging and spoils disposal shall be planned and carried out to minimize disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment shall be transported for such purposes to appropriate beaches or into suitable longshore current systems.	*Potentially consistent - Highway/Rail.* Where minor encroachments into coastal wetland areas are proposed, the project is designed to minimize disruption to marine and wildlife habitats and water circulation and provides a

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	unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor. Furthermore, the project's design and development strategies would ensure that proposed diking, filling, or dredging of existing wetlands would maintain or enhance the functional capacity of the wetland. See also discussion above.
6. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate impacts on local shoreline sand supply. Such structures shall be designed and constructed to minimize erosive impacts on adjacent unprotected property and minimize encroachment to the beach. The structures shall not interfere with access along the beach. The property owner shall dedicate all area seaward of the shoreline structure for lateral access for the public.	*N/A - Highway/Rail.* The project does not involve construction of revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, or other improvements within the City that would alter natural shoreline processes.
7. All permitted dredging (as outlined in the above policies) shall be planned, scheduled and carried out to minimize disruption to fish and bird breeding/migration, marine habitats, and water circulation.	*Potentially consistent - Highway/Rail.* Where minor encroachments into wetland areas are proposed, the project is designed to minimize disruption to marine and wildlife habitats and water circulation and provides a unique opportunity to enhance and restore such areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor. Furthermore, the project's design and development strategies would ensure that proposed diking, filling, or dredging of existing wetlands would maintain or enhance the functional capacity of the wetland. See also discussion above.
9. The City shall continue to work with the Army Corps of Engineers to solve the City's beach erosion and harbor surge and shoaling problems. Any shoreline structures proposed to solve these problems should be governed by the following criteria: a. Be the minimum necessary to solve the erosion problem; b. Be as visually unobtrusive as possible;	*N/A – Highway/Rail.* The project does not include or involve development on the shoreline or on coastal bluffs or activities that would affect beach erosion or sand replenishment within the City.

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c. Be compatible with maximum possible shoreline access and public safety; d. Protect and enhance marine life to the maximum extent feasible; e. Provide adequate mitigation for any adverse impacts on down-shore sand transport; f. For the surge and shoaling solutions only, maximize protected water areas within the existing Harbor and Turning Basin for berthing, small craft sailing, and other boating facilities.	
10. As an LCP implementing measure, the City has developed discretionary review procedures for all permanent or temporary artificial structures proposed for shoreline erosion control, including seawalls, revetments, retaining walls and breakwaters. Such structures shall be allowed if each of the criteria listed in policy #6 is met.	*N/A – Highway/Rail.* The project does not include or involve development on the shoreline and/or on coastal bluffs or activities that would affect beach erosion or sand replenishment.
11. New development along the City's coastal bluffs and hillsides should assure stability and protection of natural landforms, and neither create nor contribute significantly to erosion or geologic instability, or in any way require the construction of protective devices that would substantially alter natural landforms.	*Potentially consistent – Highway/Rail.* The project has been designed to retain significant natural features where feasible. The NCC highway and rail improvements would result in removal of existing vegetation and grading of existing landforms, and construction of new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). While the NCC project is located in an area potentially subject to various geologic hazards, the I-5 NCC highway project Draft EIR/EIS includes mitigation measures to ensure geologic stability of the improvements. In addition, a Final Program EIR/EIS was released in 2007 for the LOSSAN rail corridor improvements that included an analysis of potential impacts and mitigation measures related to geologic hazards.
12. Coastal bluff development shall be permitted if the design and setbacks are adequate to ensure stability for the expected economic life of the development, and measures are taken to control run-off, foot traffic, irrigation or other activities which could aggravate erosion problems.	*N/A – Highway/Rail.* The project does not include or involve development on the shoreline or on coastal bluffs in the City.
13. The demonstration of stability for bluff development shall occur at the time of building permit issuance and shall include a report prepared by a registered geologist, professional engineer and/or a certified engineering geologist acting within their area of expertise, based on an on-site evaluation.	*N/A – Highway/Rail.* The project does not include or involve development on the shoreline or on coastal bluffs in the City.
14. The Community Development Commission will adhere to the guidelines and recommendations of the "Geotechnical and Erosion Control Study Report, Bluff Area, Ninth Street to Wisconsin Avenue, Oceanside, California".	*N/A – Highway/Rail.* The project does not include or involve development on the shoreline or on coastal bluffs in the City.
SAN LUIS REY RIVER SPECIFIC PLAN	
Objectives:	*Potentially consistent - Highway/Rail.* The project includes bicycle and pedestrian facilities and routes that would support public access to low cost

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-The City shall maximize public access in the San Luis Rey River and environs consistent with natural resources values. -Low cost recreation and visitor serving facilities shall be a priority land use in the river area, commensurate with public demand for such facilities. -The City shall protect, maintain and enhance the river's existing sensitive habitats. -The water resources of the river shall be maintained, enhanced and, where feasible, restored. -New development shall be sited and planned in a manner which utilizes the San Luis River environs to the fullest, but retains the aesthetic and resource values present. -The City shall protect the public safety and welfare in areas of the river subject to flood or geologic hazards.	recreation and visitor serving facilities. The project also includes improvements such that many local city streets and regional roadways that cross I-5 would be pedestrian and bicycle-friendly. The project includes public recreational amenities such as trails within appropriate floodplain areas affected by the project to facilitate public access from inland to coastal areas of the City, which would be located and design to protect aesthetic and resource values.
Policies:	
1. In order to enhance access in the river area, the City shall: a. Maintain the existing trail system on the north side of the river. b. If and when funds become available, establish a viewing area with interpretive signs on the south side of Capistrano Drive, across from Capistrano Park. c. Encourage passive recreation activities such as hiking, fishing and viewing. d. Where appropriate, require developers to participate in construction of an on- and off-site site bicycle and pedestrian facility improvements.	*Potentially consistent - Highway/Rail.* See discussion under San Luis Rey River Specific Plan Objectives, above.
2. In order to protect the sensitive resources of the river area the City shall: a. Post signs at appropriate locations noting regulations on littering, off-road vehicles, use of firearms, and leash laws. b. Encourage the California Department of Fish and Game to actively enforce the Fish and Game Code in the river area. c. Require property owners to remove debris from their properties when fire or health hazards exist.	*N/A – Highway/Rail.* The project does not include or involve development that would affect the City rules and regulations pertaining to San Luis Rey River.

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d. Monitor future public use of the river area to identify areas of overuse. If such areas are identified, take steps to restrict access commensurate with the carrying capacity of the resources. e. Continue police and code enforcement against litterers, trespassers, off-road vehicles, and other violators.	
3. Developers proposing projects in the San Luis Rey Specific Plan study area shall: a. Maintain adequate buffers surrounding sensitive habitat areas, using setbacks, fencing and/or vertical separation. b. Protect habitat for the endangered Dudleya viscida. Where habitat impacts are unavoidable, the developer shall transplant the species to a protected location.	*Potentially inconsistent - Highway/Rail.* The proposed improvements may result in minor development encroachment into habitat buffers for the river area; however, the proposed project is designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible and provides an unique opportunity to enhance and restore such areas, including facilitating a comprehensive program to restore regional lagoons such as San Elijo Lagoon and Buena Vista Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of upland habitat adjacent to Batiquitos Lagoon, and restoration of riparian habitat areas within City waterways in the corridor. Furthermore, the project includes a Resource Enhancement Program that provides for advanced mitigation opportunities that will allow for wetland and upland habitat creation or significant enhancement of degraded habitat prior to project implementation. This results in eliminating even a temporary loss in the amount of habitat in the corridor. In addition, the program provides for a no net loss of habitat standard to ensure that the variety and range of significant coastal habitats in the corridor is not diminished due to the proposed rail and highway improvements.
4. In order to protect water quality in the river area, the City shall: a. Allow natural tidal circulation between the San Luis Rey lagoon and the ocean through the culverts under Pacific Street. b. As part of its environmental review process, establish measures on a project-by-project basis to minimize the introduction of grease, oil, paints, pesticides, construction waste, and other pollutants into the San Luis Rey River.	*Potentially consistent - Highway/Rail.* The project would not affect natural tidal circulation between the San Luis Rey lagoon and the ocean through the culverts under Pacific Street. The project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The project would include BMPs to address potential water quality impacts during the construction and operational phases of the project. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor.
5. On a project-by-project basis, developers proposing activities in the San Luis Rey River study area shall: a. Direct storm run-off away from the river whenever possible. b. Maximize penetrable surfaces for percolation, and if necessary, provide sediment	*Potentially consistent - Highway/Rail.* See discussion above.

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settling basins, grease traps and/or energy dissipaters. c. Use strict erosion and sedimentation controls which include: (1) Retaining all run-off from construction areas on-site in percolation-settling ponds, or channeled into culverts that possess adequate energy dissipaters to prevent erosion and sedimentation into the river lagoon. (2) Prohibiting grading from November through March. (3) Revegetating slopes upon completion of grading. (4) Minimizing the alteration of land forms.	
6. In addition to the provisions of the Zoning Ordinance, the City shall regulate erection of on-site signs in the river area as follows: a. Require any free-standing signs to be constructed of wooden and/or masonry materials with external illumination, not to exceed six feet in height. b. Prohibit any signs which would detract from the visual quality of the area and cause excessive glare or annoyance to surrounding properties.	*Potentially consistent - Highway.* New facility signage along the I-5 NCC project area would be consistent with standard Caltrans design which is generally unobtrusive to the surrounding environment. *Potentially consistent - Rail.* New facility signage along the LOSSAN rail corridor project area would be subject to future project-level environmental review and mitigation to ensure new signage is consistent with this policy.
9. New development along the I-5 and Route 76 corridors shall include measures to attenuate noise problems, such as construction of barriers or use of building insulation.	*Potentially consistent - Highway.* The project is designed to maintain natural buffers between the corridor and adjacent land uses as feasible; however, where necessary, the I-5 NCC project includes removal of existing vegetation and grading of adjacent landforms and construction of new retaining walls and soundwalls in parts of the corridor to protect adjacent areas from pollutants and noise. *N/A – Rail.* The existing LOSSAN rail corridor was established before most of the surrounding land uses were developed, and as a result, in many instances sensitive receptors are at least partially buffered by other land uses and/or noise reducing structures from the rail corridor.
11. New developments in the river area shall incorporate to the maximum extent feasible, native and/or drought tolerate plants into project landscape design.	*Potentially consistent - Highway.* The project would include measures to landscape the I-5 NCC project improvements to screen and soften views of the facility and blend with the surrounding environment including sound wall planting pockets and terraced retaining walls, which would be landscaped to reflect the visual character and goals of the City. Generally, freeway landscaping would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover

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	and, in less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. *Potentially consistent - Rail.* The LOSSAN rail corridor project would minimize and mitigate potential impacts to ESHAs within the coastal zone. In accordance with the LOSSAN rail design and development strategies, potential impacts to plant communities would be fully mitigated pursuant to the resource enhancement program.
12. New development in the river area shall be designed to be subordinate to the natural environment. Design themes which complement the natural setting and history of the area are encouraged. Such themes include rustic (using rough hewn wood, pitched roofs, heavy beams, etc.), Spanish or Early California Mission design.	*Potentially consistent - Highway.* The project would not substantially affect existing open spaces, bluffs or lagoon areas; however, throughout the City the I-5 NCC project includes various improvements that would alter existing visual resources including removal of existing vegetation and grading of adjacent landforms, new freeway signage, sensors and cameras, construction of extended paved surfaces along the roadway, and new retaining walls and soundwalls that could block existing views of natural features such as landscaping, trees, and topography (berms, hills, etc.). Measures to minimize view impacts to natural features and visual resources would include architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, as well as landscape screening of facility improvements. The project also includes opportunities to underground existing utilities where feasible thereby enhancing visual resources and reducing urbanized landscape/features. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, and would be relinquished to the City to maintain in perpetuity, thereby enhancing open space and associated natural features and visual resources where feasible. *Potentially consistent - Rail.* Future project specific environmental analysis of the LOSSAN rail corridor project would focus on the potential of the project to affect the existing visual character and quality of the area along the corridor and would provide project siting adjustments and design modifications, landscaping, and other design measures to minimize potential impacts to the natural

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	environment, as feasible.
13. In order to protect life and property in the river area from flood hazards, the City shall: a. Prevent encroachment of permanent structures into the floodway. b. Allow only flood compatible uses and structures, per the Federal Flood Insurance Agency's regulations, within the 100-year floodplain. c. Cooperate with Army Corps of Engineers to ensure completion of the flood control project, as proposed.	*Potentially consistent - Highway.* The project involves minor improvements in the floodplain for an existing public roadway, or for public recreational amenities such as trails that would facilitate public access from inland to coastal areas of the City and are compatible uses for floodplain encroachment. A Draft EIR/EIS was prepared for the I-5 NCC highway project that includes site specific mapping and study of floodplains in the project area. In all instances, the 100-year flood would be contained within existing floodplain boundaries at each location and no additional roadways would flood upstream from the proposed I-5 bridges; therefore, there would be no increased risk to life or property associated with the proposed improvements. *Potentially consistent - Rail.* A Final Program EIR/EIS was released in 2007 for the LOSSAN rail corridor improvements that included an analysis of potential impacts and mitigation measures related to floodplains. The analysis concluded that floodplain impacts are expected to be low overall, because many of the proposed improvements would be done within the established LOSSAN rail corridor designed in the floodplains.
14. In order to protect life and property in the river area from geologic hazards, the City shall: a. Require developers to stabilize or remove the vertical cut-slope in the northwestern corner of Lawrence Canyon, in conjunction with development of that site. b. Require applicants for new development in Lawrence Canyon to perform an on-site geological study, and design the project in conformity with the recommendations of a licensed engineering geologist. All development shall meet the requirements of the Alquist-Priolo Special Studies Zone Act. c. Require new bluff-top development in the river area to maintain an adequate setback from the bluff edge and, where necessary, erect barriers along the bluff to maintain public safety.	*Potentially consistent - Highway/Rail.* While the NCC highway and rail improvements would be located in an area potentially subject to various geologic hazards, measures to ensure geologic stability of the improvements are proposed.
ENVIRONMENTALLY SENSITIVE HABITAT AREAS	
Objectives: -The City shall work with other local, state, and federal agencies, including the recently formed Tri-Cities Buena Vista Lagoon Joint Powers Committee, to protect the sensitive biological habitats and water quality of Buena Vista Lagoon.	*Potentially consistent - Highway/Rail.* The proposed I-5 and LOSSAN rail corridor improvements are designed to preserve and minimize adverse impacts to significant environmental areas of the City to the maximum extent feasible. The TREP/PWP also provides a unique opportunity to enhance and restore regional lagoons and sensitive upland areas, including through facilitating a

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-The City shall provide adequate flood protection to existing development in vicinity of Loma Alta Creek in a manner which preserves the remaining resources of the creek.	comprehensive program to restore Buena Vista Lagoon, and restoration of riparian habitat areas within City waterways.
Policies:	
1. The City shall prohibit any diking or dredging of Buena Vista Lagoon and its surrounding wetlands, except for habitat restoration measures which have been specifically approved by the State Department of Fish and Game.	*Potentially inconsistent - Highway/Rail.* The proposed transportation improvements would result in minor development encroachments potentially resulting in direct impacts to Buena Vista Lagoon. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. The proposed project is designed to preserve and minimize adverse impacts to significant environmental areas of the City as described under ESHA Objectives, above. Furthermore, implementation of the rail design and development strategies would ensure that specific rail facility projects would occur within the existing footprints of existing bridges across the corridor's waterbodies.
2. Prior to approving any developments on dry lands adjacent to Buena Vista Lagoon, the City shall consult the State Department of Fish and Game to ensure that adequate measures are provided to protect and enhance the lagoon's sensitive resources. Such measures shall include, where appropriate: a. Provision for adequate buffers between development and the lagoon b. Erection of barriers – such as fences – to prohibit access to sensitive portions of the lagoon c. Incorporation of native riparian plant species into project design to enhance habitat value d. Construction of informational signs/kiosks educating the public on the value of the	*Potentially inconsistent - Highway/Rail.* See discussion above.

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lagoon, and listing the regulations for public use. e. Habitat restoration measures (such as removal of built up sediment) providing that such measures are approved by the State Department of Fish and Game.	
3. The city shall require all developments which drain into the lagoon to include measures to prevent erosion, sedimentation, and other water quality impacts, such as: a. During construction, retaining all runoff on-site in percolation settling ponds and staking down bales of straw in the drainage ways to filter remaining sediments. b. Prohibiting grading or clearing from November through March. Any soils left exposed during this period should be re-seeded or temporarily stabilized using plastic or other material as needed c. Minimizing the alteration to land forms d. Maximizing penetrable surfaces for percolation, and providing permanent settling basins. Grease traps and/or energy dissipaters.	*Potentially consistent - Highway/Rail.* The project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The project would include BMPs to address potential water quality impacts during the construction and operational phases of the project, as well as to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor.
5. In the area between Interstate 5 and Alvarado Street, the City shall prohibit encroachment of development beyond the bluff line of the lagoon.	*Potentially inconsistent - Highway.* Additional project-specific analysis is necessary to determine if the project improvements would potentially encroach beyond the bluff line within this area. However, the project is designed to preserve and minimize adverse impacts to the lagoon to the maximum extent feasible, and includes an opportunity to enhance and restore lagoon resources. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor program improvements will be contained primarily within existing rail right-of-way south of Alvarado Street, it would avoid encroachment beyond the bluff line of the lagoon between I-5 and Alvarado Street.
6. New development on the private, commercially zoned land fronting the eastern segment of the lagoon, south of Highway 78 shall be sensitive to the lagoon and its environment.	*Potentially consistent - Highway/Rail.* The project is designed to preserve and minimize adverse impacts to the lagoon to the maximum extent feasible and provides a unique opportunity to enhance lagoon resources in the corridor including facilitating a comprehensive program to restore Buena Vista Lagoon and riparian habitat areas within City waterways.
7. It is the policy of the City to prohibit filling in Loma Alta Creek.	*Potentially inconsistent - Highway.* The proposed highway improvements would require existing I-5 bridges be widened, which would include the addition of 17 additional columns and potential new fill within Loma Alta Creek. Habitat restoration for the riparian corridor is proposed, where feasible.

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	Potentially inconsistent - Rail. Although the proposed LOSSAN rail improvements would be contained primarily within existing facility corridor and/or improvement areas, the specific rail improvements at Loma Alta Creek are unknown at this time.
8. Removal of existing vegetation shall not be permitted in Loma Alta Creek except when essential for flood control purposes. In such instances, the City will obtain necessary clearances from the State Department of Fish and Game prior to commencing work.	*Potentially consistent - Highway/Rail.* The project would not include vegetation removal in Loma Alta Creek, except as necessary for habitat restoration efforts for the riparian corridor consistent with any state or federal resource agencies approvals.
9. The City shall continue to cooperate with other agencies including the State Department of Fish and Game, the Cities of Carlsbad and Vista through the Joint Powers Committee, US Fish and Wildlife Service, San Diego Association of Governments, and the Regional Water Quality Control Board in seeking ways to lessen the current impacts on the lagoon. Siltation and water pollution are two such impacts which are particularly critical.	*Potentially consistent - Highway.* Caltrans will continue consultation with the City, California Department of Fish and Game and the U.S. Fish and Wildlife Service, SANDAG and the Regional Water Quality Control Board to ensure the proposed project is designed so as not to cause disturbances to fish and wildlife values or otherwise impair the functional capacity of the lagoon. As discussed above, the proposed project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor. The project would include BMPs to address potential water quality impacts during the construction and operational phases of the project, to reduce any project sediment loading of adjacent wetland/riparian areas. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor program improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements in lagoon areas would result in no net increase in the footprint of existing rail bridges. Furthermore, similar to the I-5 NCC project, the proposed rail corridor project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor.
Standards for the Identification and Protection of Sensitive Habitats	
Identification of Sensitive Habitats: The following definitions shall apply to the identification of sensitive habitats within the Oceanside Coastal Zone.	
A. Sensitive Habitats Sensitive habitats are defined as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. All wetlands, riparian areas and habitats containing rare or endangered plants as defined below are sensitive habitats.	*Potentially consistent - Highway/Rail.* A Draft EIR/EIS has been prepared for the I-5 NCC highway project that identifies the occurrence of ESHA, and a Program EIR/EIS was prepared in 2007 for the LOSSAN rail corridor improvements which identified the occurrence of ESAs (Environmentally Sensitive Areas) in the City and throughout the corridor.
B. Wetlands	*Potentially consistent - Highway/Rail.* A Draft EIR/EIS has been prepared for

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Wetlands are lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats and fens. In the event that a wetland may not be readily identifiable, by definition, all relevant information shall be sued in making a determination including the presence or absence of hydric soils and/or hydrophytes.	the I-5 NCC highway project, and a Program EIR/EIS was prepared in 2007 for the LOSSAN rail corridor improvements identifying the occurrence of coastal wetlands in the City and throughout the corridor.
C. Riparian Areas A riparian area or corridor is a habitat of riparian plant communities. This plant community is an association of plant species which grow adjacent to fresh watercourses including perennial and intermittent streams, lakes and other bodies of fresh water.	*Potentially consistent - Highway/Rail.* A Draft EIR/EIS has been prepared for the I-5 NCC highway project, and a Program EIR/EIS was prepared in 2007 for the LOSSAN rail corridor improvements identifying the occurrence of riparian areas in the City and throughout the corridor.
D. Rare or Endangered Plants Rare or endangered plants are those species defined by the State Department of Fish and Game as "rare or endangered".	*Potentially consistent - Highway/Rail.* A Draft EIR/EIS has been prepared for the I-5 NCC highway project, and a Program EIR/EIS was prepared in 2007 the LOSSAN rail corridor improvements which identifying the occurrence of rare or endangered plants in the City and throughout corridor.
Standards for Protection of Sensitive Habitats: The following standards are general measures to be applied to all sensitive habitat areas within the Oceanside Coastal Zone. They are not intended to supercede the more detailed standards designed specifically for the Buena Vista Lagoon and San Luis Rey River areas.	See discussions, below.
A. Permitted Uses Within Sensitive Habitat Areas The following uses shall be permitted within sensitive habitats: 1. Nature education and research or similar resource-dependent activities. 2. Fishing; birding; biking; and hiking where designated by signs and trail systems. 3. Very minor incidental public service facilities including, but not limited to, burying cables and pipes and maintenance of existing intake and outfall lines when specifically approved by the State Department of Fish and Game. 4. Necessary water supply projects – streams and rivers only, providing that any substantial alterations incorporate the best mitigation measures feasible to minimize adverse environmental effects.	*Potentially inconsistent - Highway.* The I-5 NCC project improvements would result in minor encroachments potentially resulting in direct impacts to ESHA associated with Batiquitos Lagoon, San Luis Rey River and other areas along the corridor containing coastal sage scrub and southern willow scrub habitat. The proposed improvements may not be found to constitute a permitted use within identified sensitive habitat areas. *Potentially inconsistent - Rail.* Although the proposed LOSSAN rail corridor program improvements would be contained primarily within existing facility corridor and/or improvement areas, the proposed improvements may not be found to constitute a permitted use within identified sensitive habitat areas. Proposed rail design and development strategies would serve to minimize and mitigate potential impacts to ESHAs. Implementation of the rail design and development strategies would require the NCC transportation facility and community enhancement projects to be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values.

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5. Flood control projects providing the project is necessary for public safety or to protect existing development and there is no other feasible method for protecting existing structures in the floodplain. 6. Habitat restoration measures specifically approved by the State Department of Fish and Game. Any land use and/or development determined to have a significant adverse impact on sensitive habitat areas will be required to mitigate such impact. If the adverse impact of an endangered species is unavoidable, mitigation measures shall include transplantation of the endangered vegetation.	
B. Mitigation Measures The following mitigation measures are intended to protect sensitive habitat areas from adverse environmental impacts caused by adjacent development. Any development proposed in an undeveloped area within a distance of up to 500 feet from a sensitive habitat area will be considered adjacent to that habitat area. All required mitigation measures will be provided at applicant's expense. 1. Buffer Zones A buffer zone shall be established around all sensitive habitats. The buffer zone shall be generally 100 feet for small projects on existing lots. If the project requires substantial improvements or increased human impacts, a much wider buffer area shall be required. Likewise, a reduced buffer area will be considered if, in consultation with the State Department of Fish and Game it can be demonstrated that 100 feet is unnecessary to protect the resources of the habitat area. The biological significance of adjacent lands, sensitivity of species to disturbance, and susceptibility of parcel to erosion shall all be factors taken into consideration in the determination of the adequate width of the buffer zone. Such evaluations shall be made on a case-by-case basis. Where feasible, existing cultural features, such as roads and dikes, should be used to buffer habitat area. For a wetland, the buffer area should be measured from the landward edge of the wetland. For a watercourse, the buffer zone should be measured from the landward edge of riparian vegetation of, if no vegetation exists, from the top edge of the bank. No principal structures shall be permitted within a buffer zone. Development shall be permitted within a buffer zone. Development shall be limited to access paths, fences necessary to protect the habitat area and similar developments which have beneficial	*Potentially consistent - Highway/Rail.* As the existing location of the I-5 and rail facilities require that the proposed project occur in areas containing wetlands and riparian habitat, the project would not provide the standard minimum buffers recommended by this policy. However, this policy allows for reduced buffer widths on a site specific basis where it can be demonstrated that the project design with reduced buffer width will achieve the purposes of the buffer. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the Coastal Commission staff will be consulted in buffer determinations for the I-5/LOSSAN NCC project. The highway project involves construction on slopes exceeding 20%; however, the Draft EIR/EIS prepared for the I-5 NCC highway project includes soils and geotechnical studies documenting the project will not adversely affect hillside or soil stability. The I-5 NCC project would also install freeway landscaping that would include noninvasive drought tolerant ornamental trees, shrubs, and groundcover. In less developed areas of the highway corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. The highway project is designed to maintain natural buffers between the corridor and adjacent land uses as much as possible; however, where necessary, the I-5 NCC project includes removal of existing vegetation and grading of adjacent landforms and construction of new retaining walls and soundwalls in parts of the corridor to protect adjacent areas from pollutants, noise and exhaust.

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effects or no significant adverse effects. 2. Grading Restrictions/Erosion Control All grading activities for roads, future building pads, utilities and installation of erosion and sedimentation devices shall be prohibited within the period from November 1 to March 31 of each year. Prior to commencement of any grading activity, the permittee shall submit a grading schedule which indicates that grading will be completed within the permitted time frame designated in this condition and that any variation from the schedule shall be promptly reported to the City Engineer. All areas disturbed by grading shall be planted prior to November 1, with temporary or permanent (in the case of finished slopes) erosion control vegetation. Said planting shall be accomplished under the supervision of a licensed landscape contractor and shall consist of planting, mulching, fertilization and irrigation adequate to provide 90% permanent coverage within 90 days. Planting shall be repeated if the required level of coverage is not established. This requirement shall apply to all disturbed soils, including stockpiles, and to all building pads. Lands with a natural slope of 20% or greater and with a minimum elevation differential of 25 feet shall not be developed. Lands with a natural slope of 20% to 40% shall be permitted to develop if the project incorporates appropriate mitigation measures to control runoff. All permanent erosion control devices shall be developed and installed prior to, or concurrent with, any on-site grading activities. 3. Landscaping Requirements A detailed landscape plan indicting type, size, quantity and location of plant materials, the proposed irrigation system, and other landscape features shall be submitted to the City, reviewed and determined to be adequate. Drought tolerant plant materials shall be utilized to the maximum extent feasible. 4. Barriers The erection of barriers, such as fencing or other vertical separations, may be required to prohibit access to particular portions of the sensitive habitat area. Where possible, barrier	As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing facility corridor and/or improvement areas, proposed improvements would minimize encroachments into wetland areas, vegetation removal, and/or grading activities to the extent feasible.

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design should be incorporate into the overall site design and be aesthetically pleasing. 5. Noise Attenuation In order to attenuate any existing or anticipated noise problems, barriers, insulation and/or other means may be required.	
C. Required Project Information An applicant for a permit to develop within or near a sensitive habitat shall be required, by the City, to submit the following additional information as part of the project's environmental review. The size of the study area will depend upon natural topographic features, location of existing developments, and potential biological significance of adjacent lands, as determined by the City. In undeveloped areas, the required study area may extend 500 feet or more around the sensitive habitat area. 1. Maps The following maps shall be submitted: Topographic base map, inundation map, vegetation map, and soils map. 2. Supplemental Information A report should be prepared which demonstrates that all of the criteria for development in sensitive habitat areas have been met. The report should investigate physical and biological features existing in the habitat area and evaluate the impact of the development on the existing ecosystem. The information should be prepared by a professional environmental scientist with expertise in the ecosystem in which the development is proposed. The report should be based on an on-site investigation, in addition to a review of the existing information on the area, and should be sufficiently detailed to enable the City to determine potential immediate and long range impacts of the proposed project. The report should describe and analyze the following: a. Present extend of the habitat, b. Previous and existing ecological conditions, c. Present and potential adverse physical and biological impacts on the ecosystem, d. Alternatives to the proposed development, including different projects and off-site alternatives,	*Potentially consistent - Highway/Rail.* A Draft EIR/EIS has been prepared for the I-5 NCC highway project and a Program EIR/EIS was prepared in 2007 for the LOSSAN rail corridor improvements identifying the occurrence of ESHA, potential impacts and mitigation measures applicable to the City and throughout the corridor consistent with this policy.

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e. Mitigation measures, including restoration measures and proposed buffer areas, f. If the project includes dredging, explain the following: (1) The purpose of the dredging (2) The existing and proposed depths (3) The volume and areas to be dredged (4) Location of dredging (5) The location of proposed spoil disposal (6) The grain size distribution of spoils (7) The occurrence of any pollutants in the dredge spoils g. If the project includes filling, identify the type of fill material to be used, including pilings or other structures, and specify the proposed location for the placement of the fill, the quantity to be used and the surface area to be covered. h. If the project included diking, identify on a map the location and size, as well as the location, size and invert elevation of any existing or proposed culverts or tide gates. i. Benchmark and survey data used to locate the project, the lines or highest tidal action, mean high tide, or other reference points applicable to the particular project. j. Other governmental approvals required and obtained. Indicate the public notice number of Army Corps of Engineers permit, if applicable.	
VISUAL RESOURCES & SPECIAL COMMUNITIES	
Objectives: The City shall protect, enhance and maximize public enjoyment of Coastal Zone scenic resources. The City shall, through its land use and public works decisions, seek to protect, enhance, and restore visual quality of urban environment.	*Potentially consistent - Highway.* The project has been designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility and as such, would not significantly encroach into and adversely affect existing open spaces, bluffs or lagoon areas. Proposed highway improvements would be contained, in large part, within the existing ROW or would be located directly adjacent and contiguous to the existing facility. Highway improvements are not expected to result in substantial visual resource impacts associated with obstructing public views from adjacent public areas to significant coastal and inland visual resources. View impacts from proposed highway improvements to the corridor's most

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	significant coastal visual resources, specifically views to the ocean, coastline, lagoons, and river valleys, would be avoided or, in large part, minimized given that these resources are typically visible across or below the corridor's large lagoon and river bridges that provide visual access to these highly scenic view corridors. These view corridors would continue to be bridged and generally do not require large soundwall or retaining wall construction that could obstruct existing views. Constructing new DARs could also potentially affect coastal visual resources in the corridor as viewed by highway travelers and from adjacent properties. However, the DAR proposed at Oceanside Boulevard would not result in substantial impacts to coastal visual resources. The proposed DAR at Oceanside Boulevard would be located outside the Coastal Zone in a developed area not highly visible from within the Coastal Zone and thus would not affect coastal visual resources. Although the I-5 NCC project includes various improvements that would generally result in a more hardened landscape along I-5 with installing additional road surface, access ramps, sound and retaining walls, and other urban features such as signage and lighting, which could affect travelers' views to adjacent landforms and developed areas unique to the corridor, and could remove areas of significant vegetation, the TREP/PWP implementation measures require that project features such as terrain-contoured retaining walls, planting pockets, median landscaping, enhanced bridge design, specific bridge railing design, landscape buffer planting at the top of walls, and widened sidewalks and landscaped parkways be incorporated into project to minimize impacts to coastal visual resources and to reflect the visual character and goals of each affected community. Furthermore, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing facility corridor and/or

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	improvement areas, the proposed improvements would minimize the need for any grading activities, thereby reducing the potential for any significant changes to existing natural environment. At-grade track improvements would have minimal to no impacts on public views to and along the ocean and shoreline, or to scenic inland areas for both traveler and adjoining views. While at-grade track improvements have the potential to increase the visibility of the facility within the ROW as viewed from on- and off-site locations, the increase in improvement area would be minor, incremental and consistent with the existing facility and the surrounding environment. Site-specific visual impacts would be analyzed during project-level analysis to protect the existing visual character and quality of the area along the corridor through project siting adjustments and design modifications, landscaping, and other design measures to minimize potential impacts to the natural environment, as feasible.
Policies	
1. In areas of significant natural aesthetic value, new developments shall be subordinate to the natural environment.	*Potentially consistent – Highway/Rail.* See discussion under Visual Resources Objectives, above.
3. All new development shall be designed in a manner which minimizes disruption of natural land forms and significant vegetation.	*Potentially consistent – Highway/Rail.* See discussion under Visual Resources Objectives, above.
4. The City shall maintain existing view corridors through public rights-of-way.	*Potentially consistent – Highway/Rail.* See discussion under Visual Resources Objectives, above. The I-5 NCC highway and LOSSAN rail improvements would not adversely affect the City's ability to maintain view corridors through public rights-of-way.
5. The City shall encourage development of viewing areas at the Pacific Street Linear Park, the Buena Vista Lagoon Fishing area (provided by Eaton Hill developers) and from the frontage road between Highway 78 and the inland portion of Buena Vista Lagoon.	*Potentially consistent – Highway/Rail.* The I-5 highway and LOSSAN rail improvements would not adversely affect the viewing areas at the Pacific Street Linear Park, the Buena Vista Lagoon Fishing area (provided by Eaton Hill developers) and from the frontage road between Highway 78 and the inland portion of Buena Vista Lagoon.
6. Open space buffers or greenbelts shall be provided along major scenic corridors.	*Potentially consistent - Highway.* The project is designed to maintain natural buffers along the corridor and would include freeway landscaping that would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover to the extent feasible. In less developed areas of the corridor, landscaping with drought tolerant ornamental and native trees and shrubs would be planted and areas adjacent to native habitat would receive native landscaping designed in consultation with the District Biologist. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State

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	right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, and would relinquished to the City to maintain in perpetuity, thereby enhancing open space and associated natural features and visual resources where feasible. *Potentially consistent - Rail.* As the proposed LOSSAN rail improvements would be contained primarily within existing rail right-of-way, the need for grading activities into open space or undeveloped lands is minimized.
8. The City shall ensure that all new development is compatible in height, scale, color and form with the surrounding neighborhood. (9)	*Potentially consistent - Highway.* The project has been designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility and as such, would not significantly encroach into and adversely affect existing open spaces, bluffs or lagoon areas. Proposed highway improvements would be contained, in large part, within the existing ROW or would be located directly adjacent and contiguous to the existing facility. Highway improvements are not expected to result in substantial visual resource impacts associated with obstructing public views from adjacent public areas to significant coastal and inland visual resources. Measures would also be implemented to minimize view impacts to natural features and visual resources including architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, including various methods of landscape screening of facility improvements. *Potentially consistent - Rail.* The proposed LOSSAN rail improvements would be contained primarily within existing rail right-of-way; however, some improvements could result in a more urban aesthetic along the rail corridor which could be potentially incompatible in height, scale, color and form with the surrounding neighborhoods. Future project-specific environmental analysis of the LOSSAN improvements would allow for a more precise evaluation of potential visual/compatibility effects and could identify appropropriate project siting adjustments and design modifications, landscaping, and other design measures to minimize potential impacts to the natural environment.
9. In areas where a change to a more intensive use is proposed, adequate buffers or transition zones (such as increased setbacks, landscaped barriers, or decorative walls) shall be provided.	*Potentially consistent - Highway.* The project is designed to maintain natural buffers along the corridor and would include freeway landscaping that would include, noninvasive drought tolerant ornamental trees, shrubs, and groundcover. Measures to minimize view impacts to natural features and visual

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	resources including architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, including various methods of landscape screening of facility improvements would be implemented, as feasible. *Potentially consistent - Rail.* As the proposed LOSSAN improvements would be contained primarily within existing rail right-of-way, the need for grading activities is minimized, thereby reducing the potential for significant changes to the existing natural environment. Furthermore, site- and project-specific siting adjustments and design modifications, landscaping, and other design measures would be implemented as part of rail improvements to minimize potential impacts to the natural environment.
11. The City shall encourage variety, creativity, and site-responsive design for all new development.	*Potentially consistent - Highway/Rail.* See discussion above.
13. New development shall utilize optimum landscaping to achieve the following effects: a. Accent and enhance desirable site characteristics and architectural features. b. Soften, shade and screen parking and other problem areas. c. Frame and accent (but not obscure) coastal views. d. Create a sense of spaciousness, where appropriate. e. In areas where significant natural vegetation exists, replant, as appropriate, developed areas with native drought-tolerant species.	*Potentially consistent - Highway/Rail.* See discussion above.
NEW DEVELOPMENT & PUBLIC WORKS	
OBJECTIVES: -The City endorses infilling and revitalization of the Coastal Zone for the purpose of creating an attractive, balanced, and economically sound urban environment. -New public works facilities in the Coastal Zone shall be sited and designed to meet all policies of the City's Local Coastal Program.	*Potentially consistent - Highway/Rail.* See policy analysis under respective sections of the City's LCP.
POLICIES:	
1. The City shall deny any project which diminishes public access to the shoreline,	*Potentially consistent - Highway/Rail.* See policy analysis under respective

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degrades coastal aesthetics, or precludes adequate urban services for coastal-dependent, recreation, or visitor serving uses.	sections of the City's LCP.
2. The City shall promote development of a high level of transportation facilities, public services and amenities in the Coastal Zone as a means for reducing energy consumption and vehicle miles traveled. Such actions include: a. Support continued high levels of North County Transit District Service to all portions of the Coastal Zone. b. Support expansion and upgrading of Amtrak service, commensurate with need, but oppose the proposed bullet train because of unmitigable effects on Coastal Zone resources. c. Encourage preservation of existing and development of new neighborhood commercial uses such as markets, banks and small retail stores. d. Support development of a wide variety of private and public recreational and tourist facilities which can attract and serve both visitors and residents. e. Encourage continued development of bicycle and pedestrian facilities per the LCP access policies.	*Potentially consistent - Highway/Rail.* The TREP/PWP's main purpose is to improve the existing and future transit operations in the I-5 and LOSSAN north coast corridors in order to improve the safe and efficient regional movement of people and goods for current and future users. The proposed project would improve the corridor while protecting and enhancing community character with sensitive design and community enhancement features. The highway improvements would enhance coastal access and recreation by reducing congestion and providing designated Managed Lanes to incentivize HOV and transit use, while the rail project would include a mix of double tracking, other track capacity enhancements (cross-overs, station 'stub' tracks, station pass-through tracks), rail bridge replacement, parking and other station enhancements to improve capacity and, therefore, improve reliability, reduce travel times and further support multi-modal transit options as a viable alternative to the single occupancy vehicle. The highway and rail projects also include other transit improvements, such as improved bicycle and pedestrian facilities and route linkages that connect with public transit centers that connect neighborhoods with inland and coastal recreational use areas.
3. New or expanded public works facilities shall be sized to serve new development and uses allowed pursuant to the LCP Land Use Plan.	*Potentially consistent - Highway/Rail.* See discussion above.
4. The City shall approve new development in the Coastal Zone only if essential public facilities will be available to serve that development.	*Potentially consistent - Highway/Rail.* See discussion above.
5. In the event that any public service capacity (such as sewer, water or street facilities) becomes limited, the City shall assign priority for the remaining capacity to the following uses: a. Coastal dependent land use; b. Essential public services and basis industries vital to the economic health of the region, state or nation; and,	*Potentially consistent - Highway/Rail.* See discussion above.

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c. Commercial recreation and visitor serving land uses.	
BEACH ACCESSWAYS: STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE	
FUNCTIONAL CRITERIA	
Standard No. 2: Coastal access trails should not be located in areas of high fire or erosion hazard, unless the trail facility is designed and constructed in the manner that does not increase the hazard potential, or is required to correct abuse by existing access use. Access trails should not be located in areas hazardous to public safety, unless those hazards can be satisfactorily mitigated through project design.	*Potentially consistent - Highway/Rail.* The TREP/PWP includes public recreational amenities such as trails within appropriate floodplain and hillside areas affected by the project to facilitate multi-modal public access to coastal and inland recreational use areas of the City. Passive recreational uses are compatible with these areas and would be designed and constructed in a manner that does not increase hazard potential.
Standard No. 3: Access trails constructed on access easements should be no wider than necessary to accommodate the numbers and types of trail users that can reasonably be expected to use the trail. Trail width can vary from a minimum of 24 inches to a maximum of 10 feet or wider, depending on factors such as topography and proximity of the accessway to developed areas or major support facilities. Trails to accommodate both pedestrian and equestrian use should be a maximum of 70 percent (i.e., a 7 foot vertical drop for every 10 feet of horizontal distance). The preferred maximum gradient for access trails should not exceed 16 percent. The minimum overhead clearance for pedestrian trails should be 7 feet and 9 feet for equestrian trails. Wherever possible, appropriate wheelchair access to the ocean should be provided and ramps should be a minimum of 4 feet wide with a maximum gradient of 10 percent. Hard surfaces or beneath sand ramp materials should be provided in accordance with available technology and existing environmental conditions.	*Potentially consistent - Highway/Rail.* The proposed recreational trail improvements and pedestrian/bike route linkages are intended to facilitate and compliment the City's trail plans. Proposed trail location and construction would be implemented consistent with the City's design standards.
Standard No. 4: The design and placement of access trails should fully provide for the privacy of adjoining residences. Each vertical access easement in a residential area should be sufficiently wide to permit the placement of a trail and/or fencing and a landscape buffer as necessary to ensure privacy and security. Depending on local considerations in single-family residential neighborhoods, vertical accessways may be fenced on the property line and use-restricted to daylight hours.	*Potentially consistent - Highway/Rail.* See above discussion.
Standard No. 5:	*Potentially consistent - Highway/Rail.* See above discussion.

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Public access to sensitive coastal resource areas such as bluffs, wetlands, tidelands or riparian habitat areas should be evaluated on a case-by-case basis, in conjunction with the State Department of Fish and Game. Such accessways should be designed and constructed as to avoid adverse effects on the resource and, where possible, enhance the resource.	
Standard No. 6: Public accessways should conform to the following aesthetic considerations: a) structures shall consist primarily of wood and other natural materials, while providing continuity with existing or proposed development in the vicinity. Rustic wood pilings and railroad ties are recommended where practical. However, in selecting construction materials, maintenance costs and susceptibility to vandalism should also be taken into account; b) facilities shall be located and designed to preserve natural vegetation; c) landscape planting shall be required as necessary to ensure public safety, the privacy of adjacent residential units and adequate screening of facilities; d) landscape screening such as dense shrubbery should be provided in lieu of fencing whenever feasible and adequate to provide public safety; e) new landscape vegetation shall be drought resistant and salt tolerant and shall require minimum care and maintenance. Such vegetation shall be compatible with the surrounding landscape.	*Potentially consistent - Highway/Rail.* See above discussion.
Standard No. 7: Construction of accessways: a) where coastal access is currently available and construction of permanent access facilities is to take place, safe, interim access shall be provided, if feasible; b) construction of coastal access structures should take place expediently according to schedule. If for some reason completion is not possible as scheduled and work is halted, the site shall be made safe for the public and shall not be subject to erosion or other environmental degradation;	*Potentially consistent - Highway/Rail.* See above discussion.

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c) during construction, the site shall be cordoned or fenced off from the public to prevent any injury; d) where bluffs exist, extreme care shall be taken to avoid and protect bluff areas not to be disturbed, including vegetation.	
Standard No. 8: Within funding capabilities, the following regular maintenance shall be provided: a) regular trash pickup and garbage collection; b) painting or replacement of materials as needed; c) fertilizing, watering, pruning, weeding and replacement o0f plant materials and irrigation materials as needed; d) replacement materials shall be identical to original materials, unless otherwise approved.	*Potentially consistent - Highway/Rail.* See above discussion.
Standard No. 11: Upland Trails Upland trails should be established along blufftop areas such as Pacific Street above The Strand, and in the vicinity of other coastal resources such as the Buena Vista Lagoon and San Luis Rey River. The primary objective of locating an upland trail is to provide continuous pedestrian and/or equestrian access for passive recreational use. Upland trails should not be located on geologically unstable blufftop areas on highly erosive soils.	*Potentially consistent - Highway/Rail.* The TRP/PWP includes a number of recreational pedestrian and bike trail improvements intended to facilitate and compliment the City's trail plans, including linking routes and providing public access opportunities at Buena Vista Lagoon and San Luis Rey River. Proposed trail location and construction is intended to be implemented consistent with the City's design standards and resource protection policies. Passive recreational uses are compatible with these areas and would be designed and constructed in a manner that does not increase hazard or erosion potential.
Standard No. 13: View Corridors <u>Specifications</u>: View corridors should be considered as "visual access" and an integral part of coastal access. Open space buffers or greenbelts should be provided along major view corridors. Efforts should be made to integrate view corridors with vertical access points whenever possible. <u>Location and Distribution</u>: Because of the recreational and scenic value of the coastal landscape, view corridors should be provided wherever possible, along linear greenbelts or internal streets. In the event of proposed new development or redevelopment, structures	*Potentially consistent - Highway.* The project has been designed such that the amount of right-of-way required for each alternative is the minimum amount of land required to fulfill the purpose and need of the project and to meet operational requirements of the facility and as such, would not significantly encroach into and adversely affect existing open spaces, bluffs or lagoon areas. Proposed highway improvements would be contained, in large part, within the existing ROW or would be located directly adjacent and contiguous to the existing facility. Highway improvements would not result in substantial visual resource impacts associated with obstructing public views from adjacent public

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should be sited so as to protect existing view corridors and/or provide new corridors.	areas to significant coastal and inland visual resources. Measures to minimize view impacts to natural features and visual resources include architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, as well as landscape screening of facility improvements. The project also includes opportunities to underground existing utilities where feasible thereby enhancing visual resources and reducing urbanized landscape/features where possible. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, and would relinquished to the City to maintain in perpetuity, thereby enhancing open space and associated natural features and visual resources where feasible. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing facility corridor and/or improvement areas, the proposed improvements would minimize the need for any grading activities, thereby reducing the potential for any significant changes to existing natural environment that would affect existing viewing corridors.
Standard No. 14: Coastal Bikeways/Trails (d) Hiking/Biking Trail <u>Location and Distribution</u>: Where appropriate, the City shall require developers to participate in the construction of on- and off-site bicycle and pedestrian facility improvements in the San Luis Rey River area. (LUP SLR River policy #1d). Also, the City shall support the inclusion of a bicycle/pedestrian trail system in conjunction with the development of the Route 76 bypass project. (LUP SLR River policy #1e).	*Potentially consistent - Highway/Rail.* The project includes public recreational amenities such as trail and bike route linkages to facilitate access to coastal and inland recreation use areas of the City. The project also includes bicycle-friendly improvements to many local streets and regional roadways that cross I-5, meaning that Class II Bicycle Lanes would be painted on the shoulders and Class III Bicycle Routes signed to accommodate users to the Pacific Coast "Bike"- Centennial Bicycle Route that extends between Oregon and the International Border at Mexico.
Standard No. 15: Support Facilities <u>Specifications</u>: The following minimum support facilities shall be provided where funds allow: (a) <u>SIGNS</u>: Signs for each vertical accessway at the nearest public road and at the point of entry. Upland trails should be signed at every trail intersection and marked	*Potentially consistent - Highway/Rail.* The project includes public recreational amenities such as trails and bike routes to facilitate public access to coastal and inland recreation use areas of the City. Caltrans/SANDAG would coordinate with the City to ensure that appropriate support facilities would be provided consistent with this policy.

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every mile if necessary to maintain the continuity of the trail in difficult terrain and wherever warranted to alert trail users about their responsibility to respect privacy and avoid trespass; (b) BENCHES: Benches or seating areas should be provided at the top of a stairway and where stairways are lengthy, on the landing where there is a view, along upland trails, and at vista points; (c) TRASH RECEPTACLES: Trash receptacles, adequate in size and design, shall be required and placed at regular intervals along trail routes, accessways, recreation areas, and vista points; (d) PICNIC TABLES AND SHELTERS: Picnic Tables and shelters should be included where there is adequate public right-of-way in very close proximity to the beach or vista points; (e) PARKING AREAS: Each vertical accessway in an existing single-family residential area serving needs greater than those of the local neighborhood should include a minimum of 5 on or off-street public parking spaces or a transit stop within 100 feet of the accessway. Coastal access parking areas should provide at least one designated disabled parking space for every 20 spaces provided. Parking at vertical accessways that provide beach access for the disabled should designate at least one put of every 5 parking spaces for disabled persons. Parking lots should be provided with curb cuts leading to all adjacent walks, paths, or trails. Restrooms and other public service facilities should be accessible to wheelchair occupants. Facilities for the disabled should be conspicuously signed. (f) BIKE RACKS, PUBLIC TELEPHONES, RESTROOMS AND SHOWERS shall be provided as funds allow in key recreation areas. Exceptions: It is the policy of the City of Oceanside to encourage innovative design of public accessways. In this light, projects offering creative, special design solutions to accessway development will be considered by the Planning Commission and City Council. Modifications to the standards set forth above may be permitted in such cases providing the design is aesthetically pleasing and in conformance with the Coastal Land Use Plan and all other state regulations governing accessway provisions.	
COASTAL DEVELOPMENT DESIGN STANDARDS	
III. OVERALL OBJECTIVES 1) The City shall protect, enhance and maximize public enjoyment of the Coastal Zone	*Potentially consistent - Highway/Rail.* The project would improve public access to coastal and inland recreation use areas by reducing congestion on the I-5 and LOSSAN rail corridors and providing multi-modal transit options to

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scenic resources. 2) The City shall, through its land use and public works decisions, seek to protect, enhance and restore the visual quality of the urban environment. 3) The City shall maximize the use of recreation areas for recreation purposes. 4) The City shall encourage a continuing awareness of the long term effects of the physical forms of individual projects on the overall image of Oceanside.	Coastal Zone scenic resources. In addition, a number of recreational trail and bicycle improvements intended to facilitate and compliment the City's trail system and support non-motorized access to public recreation areas, beach support facilities, and visitor-serving facilities would be provided.
IV. PRESERVING AND CREATING VIEWS The visual orientation to the Pacific Ocean is a major identity factor for the City of Oceanside. Traditional view corridors should be preserved and reinforced in the placement of buildings and landscaping. Additionally, some views not presently recognized, deserve consideration in the design and location of further coastal improvements. View areas can be preserved and reinforced by: A. <u>Removing Obstructions</u> 1) No fencing, signage, planting, or structures should be placed in a way that will obstruct a view corridor. (Maintain existing view corridors through public rights-of-way.) 2) Visibility of major destination and other orientation points should be enhanced through signage, planting and upgrading of site and structure design 3) Proposed new development should consider surrounding views when designing building height. B. <u>Framing/Directing Views</u> 1) Fencing, signage, planting and structures shall be placed in a way that 'frame' a view and enhance it, directing the observer's eye to the view. 2) Street rights-of-way carried through to the water and views along the waterfront provide a desirable sense of contact with the water. C. <u>Screening of Unpleasant Views</u> 1) Trash bins, utility equipment, parking lots should be screened or softened by attractive fencing and/or planting. 2) Remove or obscure distracting, cluttering elements.	*Potentially consistent - Highway.* The project has been designed to occur within existing transportation corridor ROW to the extent feasible and would not significantly encroach into natural resource areas or adversely affect ocean views, or views of existing open spaces, bluffs or lagoon areas. Proposed highway improvements would be contained, in large part, within the existing ROW or would be located directly adjacent and contiguous to the existing facility. Highway improvements are not expected to result in substantial visual resource impacts associated with obstructing public views from adjacent public areas to significant coastal and inland visual resources. Measures to minimize view impacts to natural features and visual resources would include architectural detailing and enhanced color and texture of retaining and sound walls to reduce apparent size and increase compatibility with the surrounding environment, as well as landscape screening of facility improvements. The project also includes opportunities to underground existing utilities where feasible thereby enhancing visual resources and reducing urbanized landscape/features where possible. In addition, parcels in whole or in part that are purchased for freeway widening but not required for use as permanent State right-of-way would be considered as potential opportunities for community pocket parks or public open space at the request of the City, thereby enhancing open space and associated visual resources where feasible. *Potentially consistent - Rail.* As the proposed LOSSAN rail corridor project improvements would be contained primarily within existing facility corridor and/or improvement areas, the proposed improvements would minimize the need for any grading activities, thereby reducing the potential for any significant changes to existing natural environment that would affect existing viewing corridors.

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BUENA VISTA LAGOON POLICIES (BUENA VISTA LAGOON WORKING PAPER)	
General Policies 1. It is the express policy of the City to prohibit any diking, dredging or filling of Buena Vista Lagoon and its surrounding wetlands, except for habitat restoration measures which have been specifically approved by the State Department of Fish and Game. 2. Prior to approving any developments on dry lands adjacent to Buena Vista Lagoon, the City shall consult the State Department of Fish and Game to ensure that adequate measures are provided to protect and enhance the lagoon's sensitive resources. Such measures shall include, where appropriate: a) Provisions of adequate buffers between development and the lagoon. b) Erection of barriers – such as fences – to prohibit access to sensitive portions of the lagoon. c) Incorporation of native riparian plant species into project design to enhance habitat value. d) Construction of informational signs/kiosks educating the public on the value of the lagoon, and listing regulations for public use. e) Habitat restoration measures (such as removal of built up sediment) providing that such measures are approved by the State Department of Fish and Game. 3. The City shall require all developments which drain into the lagoon to include, where appropriate, the following measures to reduce erosion, sedimentation and other water quality impacts: a) Retaining all runoff from construction areas onsite in percolation settling ponds, or channeled into culverts that possess adequate energy dissipators to prevent erosion and sedimentation into the lagoon. b) Restricting grading or clearing from November through March. c) Minimizing the alteration of land forms. d) Maximizing penetrable surfaces for percolation, and if necessary, providing	*Potentially inconsistent - Highway.* The proposed project would result in minor development encroachments potentially resulting in direct impacts to Buena Vista Lagoon. Required buffer areas may also not be met due to these encroachments. The proposed improvements all appear to be incidental public services. As such, fill of wetlands would be allowed under Section 30233(a)(4) as long as there is no feasible less environmentally damaging alternative and feasible mitigation measures have been provided to minimize adverse environmental effects. Nevertheless, it is possible a different conclusion could be reached and the proposed project would not be considered an incidental public service. However, the project provides a unique opportunity to enhance and restore wetland areas including facilitating a comprehensive program to restore San Elijo Lagoon with the potential to restore tidal circulation, preservation and/or restoration via land purchase of wetland and upland habitat, and restoration of riparian habitat areas within City waterways in the corridor. The highway project would minimize potential impacts to ground, surface and ocean water quality during all phases of the project and would potentially enhance long-term water quality in the corridor through implementation of BMPs. In addition, project BMPs would be included to control and treat stormwater runoff from both existing and proposed facilities, and possibly from adjacent offsite areas, thereby potentially enhancing water quality throughout the corridor. Additional analysis is necessary to determine if the project improvements would potentially encroach beyond the bluff line on this property. *Potentially inconsistent - Rail.* Although the proposed LOSSAN rail corridor program improvements would be contained primarily within existing facility corridor and/or improvement areas, the proposed improvements may encroach into coastal wetland areas. Future project specific environmental analysis of the LOSSAN rail corridor project would allow a more precise evaluation of potential impacts to Buena Vista Lagoon from implementation of the proposed improvements. The analysis would focus on the potential of the project to affect the existing wetland area along the rail corridor and would provide project siting adjustments and design modifications, landscaping, and other design measures to minimize potential impacts to the natural environment to the extent feasible.

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sediment settling basins, grease traps and/or energy dissipators. <u>Site Specific Policies:</u> 4. In the area between Interstate 5 and the Eaton Hill property, the City shall prohibit encroachment of development beyond the bluff line and above the lagoon. 5. The City recommends, as a high priority, that the land fronting the inner segment of the lagoon, south of Highway 78, be acquired and preserved as permanent open space. The City shall examine, as an LCP implementing measure, a full range of acquisition techniques, including use of state or federal funds, and transfer of development rights. 6. In the event that the acquisition recommended above is not possible, the City shall allow a land use that is consistent with the Coastal Act.	