# STATE ROUTE 11 AND THE OTAY MESA EAST PORT OF ENTRY

SAN DIEGO COUNTY, CALIFORNIA
DISTRICT 11–SD –ROUTE 11
EA 056310 (PM 0.0/2.8)
DISTRICT 11–SD –ROUTE 905 (PM R8.4/10.1)

# DRAFT

## TIER II ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT


**Prepared by**
**U.S. Department of Transportation Federal Highway Administration**
**and**
**State of California Department of Transportation**

**NOVEMBER 2010**

# CONSTRUCTION OF A NEW STATE ROUTE AND PORT OF ENTRY IN THE EAST OTAY MESA AREA OF THE CITY AND COUNTY OF SAN DIEGO, CALIFORNIA FROM THE STATE ROUTE 905/STATE ROUTE 125 INTERCHANGE TO THE U.S.-MEXICO BORDER ROUTE 11 POST MILE (PM) 0.0 TO 2.8; ROUTE 905 PM R8.4 TO 10.1

## DRAFT
## TIER II ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S.C. 4332 (2)(C) and 49 U.S.C. 303

U.S. DEPARTMENT OF TRANSPORTAION
Federal Highway Administration

And

STATE OF CALIFORNIA
Department of Transportation

COOPERATING AGENCIES

U.S. General Services Administration
U.S. Department of State
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
U.S. Customs and Border Protection
U.S Army Corps of Engineers
International Boundary and Water Commission

RESPONSIBLE AGENCY

California Transportation Commission
City of San Diego
County of San Diego
California Department of General Services
San Diego Association of Governments
California Department of Fish and Game
Regional Water Quality Control Board
California Public Utilities Commission

11-24-10
Date of Approval

Laurie Berman
Director, District 11
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11.24.2010
Date of Approval

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Abstract: The proposed action represents Tier II of a two-phase process. Phase I identified the locations for the future implementation of State Route 11 (SR-11) and the Otay Mesa East Port of Entry (POE), both of which would be entirely new facilities. The Tier II process involves providing detailed environmental analysis of the proposed design alternatives for the new SR-11 toll highway, the POE and an associated Commercial Vehicle Enforcement Facility (CVEF), including SR-11 connectors to SR-905 and associated modifications to SR-905. Tier II objectives include increasing regional inspection capacities for commercial/personal vehicles and pedestrians; reducing northbound vehicle/pedestrian queues and wait times; accommodating projected increases in international commercial trade and personal vehicle border traffic; contributing to reduced congestion at border crossings and along regional transportation infrastructure; accommodating commercial goods movement and cross-border travel; minimizing impacts to the aquatic environment; accommodating bicycle- and transit-related border traffic; and supporting the 1998 "Binational Corridor Preservation for State Route 11 - Tijuana/Rosarito 2000 and Site Designation for the East Otay Mesa-Mesa de Otay II Port of Entry" Letter of Intent. Three build alternatives and five design variations for the SR-11 corridor are evaluated in this Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS), along with the No Build Alternative. The three SR-11 alternatives include the Two Interchange, One Interchange and No Interchange alternatives, while the design variations involve a no-toll option, a modified median design, two design options for the SR-905/SR-125/SR-11 Interchange, and a design option for the Siempre Viva Road Interchange. The POE and CVEF design and location would be the same under all the SR-11 alternatives and design variations. Potential benefits from the Tier II project would include provision of additional border crossing capacity to meet current and projected demand for the movement of people and goods between the United States and Mexico, as well the reduction of wait times and other inefficiencies associated with border crossings.

## General Information about This Document

**What's in this document:**

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), have prepared this Tier II Environmental Impact Report/Environmental Impact Statement (EIR/EIS), which examines the potential environmental impacts of the alternatives and variations being considered for the proposed project located in East Otay Mesa in San Diego County, California. The EIR/EIS describes why the project is being proposed, what alternatives we have considered, how the existing environment could be affected by the project, the potential impacts of each of the alternatives and variations, and the proposed avoidance, minimization, and/or mitigation measures.

**What you should do:**

- Please read the document.

Additional copies of it, as well as of the technical studies we relied on in preparing it, are available for review at the Caltrans District Office at 4050 Taylor Street, San Diego CA 92110, at http://www.dot.ca.gov/dist11/envir, and the following locations:

Otay Mesa Chamber of Commerce
9163 Siempre Viva Road, Suite I-2
San Diego, CA 92154

San Diego County Library – Otay Mesa-Nestor Branch
3003 Coronado Avenue
San Diego, CA 92154

San Diego County Library – Imperial Beach Branch
810 Imperial Beach Blvd.
Imperial Beach, CA 91932

San Diego County Library – Bonita-Sunnyside Branch
4375 Bonita Road
Bonita, CA 91902

- Attend the public meeting: Wednesday, January 19 from 5:30p.m. to 7:30p.m. at Ocean View Hills Elementary School, located at 4919 Del Sol Boulevard, San Diego, CA 92154
- We welcome your comments. If you have any comments regarding the proposed project, please attend the public meeting and/or send your written comments to Caltrans by the deadline.
- Submit comments via postal mail to:
  Sandra Lavender
  Division of Environmental Analysis
  California Department of Transportation
  4050 Taylor Street
  San Diego, CA 92110
- Submit comments via e-mail to: Sandra_Lavender@dot.ca.gov
- Submit comments by the deadline: February 1, 2011

**What happens next:**

After comments are received from the public and reviewing agencies, Caltrans and the FHWA may undertake additional environmental and/or engineering studies. A Final EIR/EIS will be circulated; the Final EIR/EIS will include responses to comments received on the Draft EIR/EIS and will identify the preferred alternative. Following circulation of the Final EIR/EIS, if the decision is made to approve the project, a Notice of Determination will be published for compliance with the California Environmental Quality Act and a Record of Decision will be published for compliance with the National Environmental Policy Act. If the project is given environmental approval and funding is appropriated, Caltrans and FHWA could design and construct the entire project at once, or could implement the project in stages.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans District 11, Attn: Sandra Lavender, Division of Environmental Analysis, 4050 Taylor Street, San Diego, CA 92110; (619) 688-3135 Voice, or use the California Relay Service TTY number, 711.

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# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AADT | annual average daily traffic |
| AB | Assembly Bill |
| ACM | Asbestos Containing Materials |
| ACP | Asbestos cement pipe |
| ADA | Americans with Disabilities Act |
| ADL | aerially-deposited lead |
| ADT | average daily trips |
| AGR | agricultural supply |
| AI/TSE | anti-idling and truck stop electrification |
| APCD | Air Pollution Control District |
| APE | Area of Potential Effect |
| APN | Assessor's Parcel Number |
| AQUA | aquaculture |
| ARB | California Air Resources Board |
| AST | above ground storage tank |
| | |
| Basin Plan | RWQCB Water Quality Control Plan for the San Diego Basin |
| BCC | Bird of (federal) Conservation Concern |
| BIOL | preservation of biological habitats of special significance |
| BLM | Bureau of Land Management |
| BMI | benthic macroinvertebrate |
| BMO | Biological Mitigation Ordinance |
| BMPs | best management practices |
| BRCA | Biological Resource Core Area |
| BRT | Bus Rapid Transit |
| BSA | Biological Study Area |
| BTS | U.S. Bureau of Transportation Statistics |
| | |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CAL FIRE | California Department of Forestry and Fire Protection |
| Cal/OSHA | California Division of Occupational Safety and Health |
| Caltrans | California Department of Transportation |
| CBC | California Building Code |
| CBP | U.S. Customs and Border Protection |
| CCR | California Code of Regulations |
| CCTV | closed-circuit television |
| CDC | California Department of Conservation |
| CDFG | California Department of Fish and Game |
| CDMG | California Division of Mines and Geology |
| CEQ | Council on Environmental Quality |
| CEQA | California Environmental Quality Act |

| | |
|---|---|
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| CERFA | Community Environmental Response Facilitation Act |
| CESA | California Endangered Species Act |
| CGS | California Geological Survey |
| CFD | community facilities district |
| CFR | Code of Federal Regulations |
| $CH_4$ | methane |
| CHP | California Highway Patrol |
| CIA | Community Impact Assessment |
| CIC Research | CIC Research, Inc. |
| City | City of San Diego |
| CIWMB | California Integrated Waste Management Board |
| CLUP | Comprehensive Land Use Plan |
| CMS | changeable message signs |
| CNEL | community noise equivalent level |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| COMM | commercial sport fishing |
| County | County of San Diego |
| COZEEP | Construction Zone Enhanced Enforcement Program |
| CRHR | California Register of Historical Resources |
| CT | census tract |
| CTC | California Transportation Commission |
| CVEF | Commercial Vehicle Enforcement Facility |
| CWA | Clean Water Act |
| cy | cubic yard(s) |
| | |
| dB | decibels |
| DEH | Department of Environmental Health |
| Desk Guide | Caltrans Environmental Justice in Transportation Planning and Investments Desk Guide |
| DGS | California Department of General Services |
| DHS | U.S. Department of Homeland Security |
| DoD | U.S. Department of Defense |
| DOS | U.S. Department of State |
| DOT | U.S. Department of Transportation |
| DPLU | County Department of Planning and Land Use |
| DPP | design pollution prevention |
| DPW | County Department of Public Works |
| DSA | disturbed soil areas |
| DTSC | California Department of Toxic Substances Control |
| DWR | California Department of Water Resources |

| | |
|---|---|
| EA | Environmental Assessment |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EO | Executive Order |
| EOMPOA | East Otay Mesa Property Owners Association |
| EOMSMD | East Otay Mesa Sewer Maintenance District |
| EOMSP | East Otay Mesa Specific Plan |
| EOMSPA | East Otay Mesa Specific Plan Amendment (or Area) |
| EOMBPSP | East Otay Mesa Business Park Specific Plan |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| EST | estuarine habitat |
| ETC | Electronic Toll Collection |
| FAST | CBP's Fast and Secure Trade program |
| FDA | U.S. Food and Drug Administration |
| FEIS/FEIR | Final Environmental Impact Statement/Final Environmental Impact Report |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal Endangered Species Act |
| FHWA | Federal Highway Administration |
| FIFRA | Federal Insecticide, Fungicide and Rodenticide Act |
| FINDS | EPA Facility Index System Registry System list |
| Form 106 | Form NRCS-CPA-106 |
| FPPA | Farmland Protection Policy Act |
| FUDS | USACE Formerly Used Defense Sites |
| FWG | Freight Working Group |
| FY | fiscal year(s) |
| g | acceleration due to gravity |
| gal | gallon |
| GHG | Green House Gas |
| GMAP | Goods Movement Action Plan |
| GSA | General Services Administration |
| GSRDs | Gross Solid Removal Devices |
| HA | Hydrolic Area |
| HCP | Habitat Conservation Plan |
| HDM | highway design manual |
| HDPE | High Density Polyethylene |
| HFC | hydrofluorocarbons |
| HHS | U.S. Department of Health and Human Services |
| HELIX | HELIX Environmental Planning, Inc. |
| HOV | high occupancy vehicle |
| HPSR | Historical Properties Survey Report |
| HSA | Hydrolic Subarea |

| | |
|---|---|
| HU | Hydrologic Unit |
| HVAC | Heating, Ventilating and Air Conditioning |
| I- | Interstate |
| IBC | International Building Code |
| IBI | Index of Biotic Integrity |
| IBWC | International Boundary and Water Commission |
| ICE-IO | U.S. Immigration and Customs Enforcement – Investigations Office |
| ICF | ICF Consulting |
| IGR | Intergovernmental Review |
| IMPlan | Instituto Municipal de Planeación |
| IND | industrial service supply |
| IPCC | Intergovernmental Panel on Climate Change |
| IRIS | Integrated Risk Information System |
| ISA | Hazardous Waste Initial Site Assessment |
| ISC | Interagency Security Committee |
| ISL | inductive sign lighting |
| ITS | intelligent transportation systems |
| KM | kilometers |
| LBA Realty | LBA Realty Fund III – Company ILLC |
| LBP | lead-based paint |
| LED | light emitting diodes |
| LEDPA | least environmentally damaging practicable alternative |
| LEED | Leadership in Energy and Environmental Design |
| LHS | Location Hydraulic Study |
| LOS | level of service |
| LPC | Light Pollution Code |
| LSAA | Lake or Streambed Alteration Agreement |
| MAR | marine habitat |
| MBAS | Methylene Blue Activated Substances |
| MBTA | Migratory Bird Treaty Act |
| MCE | Maximum Credible Earthquake |
| MEP | maximum extent practicable |
| Metro System | City of San Diego's Metro Sewer System |
| mgd | million gallons per day |
| mg/kg | milligram per kilogram |
| MHPA | Multi-Habitat Planning Area |
| MIGR | migration of aquatic organisms |
| MLD | Most Likely Descendent |
| MLS | Mass Loading Station |
| MMT | million metric tons |
| mph | miles per hour |
| MSA | Major Statistical Area |

| | |
|---|---|
| MSAT | mobile source air toxics |
| MSCP | Multiple Species Conservation Program |
| MSE | Mechanically Stabilized Earth/Embankment |
| MSL | mean sea level |
| MTS | Metropolitan Transit Service |
| MUN | municipal and domestic supply |
| MUP | Major Use Permit |
| MWD | Metropolitan Water District of Southern California |
| NAAQS | National Ambient Air Quality Standards |
| NAC | noise abatement criteria |
| NADR | Noise Abatement Decision Report |
| NAFTA | North American Free Trade Agreement |
| NAHC | Native American Heritage Commission |
| NATA | National Air Toxics Assessment |
| NAV | navigation |
| NCCP | Natural Community Conservation Planning |
| NEPA | National Environmental Policy Act |
| NES | Natural Environment Study |
| NHPA | National Historic Preservation Act of 1966, as amended |
| $N_2O$ | nitrous oxide |
| NOAA | National Oceanic and Atmospheric Administration |
| NOAA Fisheries | National Marine Fisheries Service |
| NOI | Notice of Intent |
| NOP | Notice of Preparation |
| $NO_2$ | nitrogen dioxide |
| NPDES | National Pollutant Discharge Elimination System |
| NPMS | National Pipeline Mapping System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSR | noise study report |
| NWP | Nationwide Permit |
| $O_3$ | ozone |
| OHWM | ordinary high water mark |
| OHV | Off-highway vehicle |
| OMCP | Otay Mesa Community Plan |
| OMTS | Otay Mesa Trunk Sewer |
| OSHA | Occupational Safety & Health Administration |
| OSP | Otay Subregional Plan |
| OVRP | Otay Valley Regional Park |
| OWD | Otay Water District |
| OWTS | on-site treatment systems |

| | |
|---|---|
| PA | Programmatic Agreement |
| PAHs | polycyclic aromatic hydrocarbons |
| Pb | lead |
| PCBs | polychlorinated biphenyls |
| PDS | Program Development Study/Project Design Study |
| PDT | Project Development Team |
| PEIR/PEIS | Program Environmental Impact Report/Statement |
| PFC | perfluorocarbons |
| PG Films | PG Films, LLC |
| PM | particulate matter |
| $PM_{2.5}$ | fine particulate matter with a diameter of 2.5 microns or less |
| $PM_{10}$ | fine particulate matter with a diameter of 10 microns or less |
| PM Guidance | Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and $PM_{10}$ Nonattainment and Maintenance Areas |
| POAQC | projects of air quality concern |
| POE | port of entry |
| POM | polycyclic organic matter |
| PMP | Paleontological Mitigation Plan |
| ppm | parts part million |
| PRA | Paleontological Resource Assessment |
| PRC | Public Resources Code |
| Protocol | Transportation-Level Carbon Monoxide Protocol |
| psi | pounds per square inch |
| PSR | Project Study Report |
| PUC | Public Utilities Code |
| PVC | polyvinyl chloride |
| RAP | relocation assistance program |
| RARE | rare, threatened and endangered species |
| RCA | resource conservation area |
| RCP | Regional Comprehensive Plan |
| RCP | Resource Conservation Plan |
| RCRA | Resource Conservation and Recovery Act of 1976 |
| REC | recognized environmental conditions |
| REC-1 | contact recreation |
| REC-2 | non-contact recreation |
| ROD | Record of Decision |
| RPO | Resource Protection Ordinance |
| RSA | Resource Study Area |
| RTIP | Regional Transportation Improvement Program |
| RTP | Transportation Plan for the San Diego Region (also referred to as Mobility 2030) |
| R/W | right-of-way |
| RWQCB | San Diego Regional Water Quality Control Board |

| | |
|---|---|
| SAFETEA-LU | Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users |
| SAMP | Special Area Management Plan |
| SANDAG | San Diego Association of Governments |
| Sanyo | Sanyo E and E Corporation |
| SB | Senate Bill |
| SBI | Secure Border Initiative |
| SCT | Mexican Secretariat of Communication and Transportation |
| SDAB | San Diego Air Basin |
| SDCWA | San Diego County Water Authority |
| SDG&E | San Diego Gas & Electric |
| SDMSE | San Diego Medical Services Enterprise |
| SDNHM | San Diego Natural History Museum |
| SDRFPD | San Diego Rural Fire Protection District |
| Sempra | Sempra Energy Company |
| SENTRI | Secure Electronic Network for Travelers Rapid Inspection |
| SER | standard environmental reference |
| sf | square foot (feet) |
| $SF_6$ | sulfur hexafluoride |
| SHELL | shellfish harvesting |
| SHPO | State Historic Preservation Officer |
| SIP | State Implementation Plan |
| $SO_2$ | sulfur dioxide |
| SPA | specific plan amendment |
| SPWN | spawning, reproduction and/or early development |
| SR | State Route |
| Special Animal | taxa to be of greatest conservation need to CDFG |
| SRA | Subregional Areas |
| SRE | Mexican Secretariat of Foreign Relations |
| SSC | State Species of Special Concern |
| Subarea Plan | MSCP Subarea Plan |
| SVOCs | semi-volatile organic compounds |
| SWAMP | Surface Water Ambient Monitoring Program |
| SWDR | Storm Water Data Report |
| SWIS | Solid Waste Information System |
| SWP | State Water Project |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| | |
| TDCs | Targeted Design Consituents |
| TDM | transportation demand management |
| TMC | transportation management center |
| TMDL | total maximum daily load |
| TMP | Traffic Management Plan |
| TMS | traffic loop monitoring stations |
| TNM | Traffic Noise Model |

| | |
|---|---|
| TPH | total petroleum hydrocarbons |
| Traffic Report | Tier II Traffic Technical Report |
| TSCA | Toxic Substances Control Act |
| TSM | transportation system management |
| TSS | total suspended solids |
| | |
| UFC | Unified Facilities Criteria |
| U.S. | United States |
| USACE | United States Army Corps of Engineers |
| USC | United States Code |
| USDA | U.S. Department of Agriculture |
| USFWS | United States Fish and Wildlife Service |
| UST | underground storage tank |
| US-VISIT | U.S. Visitor and Immigrant Status Indicator Technology project |
| | |
| VACIS | vehicle and cargo inspection system |
| V/C | volume-to-capacity |
| VIA | Visual Impact Assessment |
| VOCs | volatile organic compounds |
| VMT | vehicle miles traveled |
| VRPA | VRPA Technologies |
| | |
| WARM | warm freshwater habitat |
| Weston | Weston Solutions, Inc. |
| WHTI | Western Hemisphere Travel Initiative |
| WILD | wildlife habitat |
| WIM | weigh-in-motion |
| WMA | Watershed Management Area |
| WUS | Waters of the United States |
| WWM | Wastewater Management |
| WWTP | Wastewater Treatment Plant |
| | |
| °F | degrees Fahrenheit |
| $\mu g/m^3$ | micrograms per cubic meter |

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# Summary

# SUMMARY

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), propose the construction of the following facilities in San Diego County (County): a new toll highway, State Route (SR-) 11, with connectors to SR-905 and associated modifications to SR-905; the new Otay Mesa East Port of Entry (POE); and a Commercial Vehicle Enforcement Facility (CVEF). The project analyzed in this document (referenced herein as the "proposed project" or "project") includes these three major elements in the general location shown on Figure 1-1, *Regional Location Map*.

SR-11 is included in the SANDAG 2030 Revenue Constrained Regional Transportation Plan (RTP; SANDAG 2007a); the 2008 Regional Transportation Improvement Program (RTIP; SANDAG 2008), which covers Fiscal Years 2009 through 2013; and the SAFETEA-LU* List of High Priority Projects in San Diego. It is shown conceptually on the circulation elements of the East Otay Mesa Specific Plan (EOMSP) and the County General Plan as well as the Otay Mesa Community Plan (OMCP) and the City of San Diego (City) General Plan. The Otay Mesa East POE is also shown on the County's land use plan for Subarea 1 of the EOMSP, and in the RTP. A February 2011 amendment to the 2010 RTIP is expected to reflect the proposed project's modifications to SR-905 between the SR-905/SR-125/SR-11 Interchange and Britannia Boulevard, as necessary to accommodate the connection of SR-905 with SR-11.

## S.1 OVERVIEW OF PROJECT AREA

Proposed SR-11 would extend generally east and south for approximately 2.1 miles from the east side of the approved SR-905/SR-125 Interchange (near Harvest Road), terminating at the proposed Otay Mesa East POE/CVEF site at the United States (U.S.) - Mexico international border. Extending west from approximately Harvest Road, the project would include approximately 2.1 miles of connectors linking SR-11 to SR-905, and associated modifications to SR-905. The majority of SR-11 and the entire POE/CVEF site would be located within the County, in the EOMSP community planning area, while the westernmost portion of proposed SR-11, its connectors, and associated modifications to SR-905 would occur primarily within state right-of-way (R/W) and would be located within the City, in the OMCP area.

Major actions proposed by other governmental agencies in the Otay Mesa area include: Caltrans construction of SR-905 and the SR-905/SR-125 Interchange, and the I-805 Managed Lanes South; the U.S. General Services Administration (GSA)/U.S. Customs and Border Protection (CBP) improvements to the existing Otay Mesa POE and the San Ysidro POE; County and City of San Diego (City) road improvement projects including widening a portion of Otay Mesa Road, widening a border corridor truck route near La Media Road, and building Lonestar Road (a new road); construction of new South Bay Bus Rapid Transit (BRT) facilities by the San Diego Association of Governments (SANDAG); construction of a new fire station by the San Diego Rural Fire Protection District (SDRFPD); and construction of the Otay Mesa Recycled Water Supply Link by the Otay Water District.

## S.2 PURPOSE AND NEED

The proposed facilities are being studied under a two-tier process. Under the first tier (referred to as Phase I) a Program Environmental Impact Report/Phase I Environmental Impact Statement (PEIR/PEIS) was prepared and approved/certified in 2008; this document addressed SR-11 and the POE at a programmatic level and identified the preferred location of the facilities. As a result of the Phase I environmental process, a conditional Presidential Permit for the project (included as Appendix A of this EIR/EIS) was granted by the U.S. State Department in November 2008. The proposed project would

* The Federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), passed in August 2005, authorizes the federal surface transportation projects for highways, highway safety and transit.

constitute the second tier of planning and environmental clearance for the development of a new POE in the San Diego/Tijuana region, along with development of associated SR-11 that would connect the new POE to the existing and planned roadway system in the area, and a new CVEF for California Highway Patrol (CHP) inspection of trucks entering California from Mexico. This Tier II Environmental Impact Report/Environmental Impact Statement (EIR/EIS) addresses several design and operational alternatives for the POE, SR-11 and the CVEF. The purpose of the Tier II project is to:

- Increase inspection processing capacities for commercial and personal vehicles and pedestrians in the San Diego/Tijuana region
- Reduce northbound vehicle and pedestrian queues and wait times to cross the border at other POEs in the region
- Accommodate projected increases in international trade and personal cross-border travel in the region in a safe and secure manner
- Contribute to reductions in congestion at existing POEs
- Accommodate commercial goods movement and cross-border travel to and from the Otay Mesa East POE

The new POE is needed because the capacities of the existing POEs in the region are currently being exceeded, causing excessive border wait times for those engaged in commercial and personal vehicle trips. Trade and travel in this area are forecasted to continue to grow, and border delays are expected to increase correspondingly. Transportation and land use planning agencies on both sides of the border have identified the longer-term need for a third border crossing and associated transportation facilities in the San Diego/Tijuana area. While various proposed improvements to the existing POEs can enhance the flow of goods and people, growth is outstripping capacity at the existing facilities. On the Mexican side of the border, the two existing POEs are particularly constrained from expansion due to surrounding dense development. Even with maximum renovation at the regional POEs, congestion levels would continue to increase. Local, regional and bi-national land use studies (cited in Chapter 1.0) have identified the eastern side of Otay Mesa as the preferred general location for a new POE, and a corresponding POE site has been identified on the Mexico side of the border. With implementation of the POE, SR-11 becomes a critical facility to connect the POE with the regional highway system north of the border via SR-905 and SR-125, and to adequately handle the increased commercial and passenger vehicle traffic associated with a POE. Similarly, the proposed POE necessitates access to an existing or new CVEF for the CHP to conduct safety/weight inspections on incoming trucks.

## S.3 ALTERNATIVES CONSIDERED

The alternatives addressed in this EIR/EIS were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. Under evaluation in this document are three build alternatives (referred to as the Two Interchange, One Interchange, and No Interchange alternatives), with several design/operational variations, as well as the No Build Alternative. The build alternatives share the same design for the proposed improvements to SR-905 to accommodate the connection with SR-11, as well as the same conceptual designs for the POE and CVEF. SR-11 is assumed to be a toll highway under all of the build alternatives, consistent with the RTIP. Although state legislation has already approved SANDAG as the tolling agency for future SR-11 and a toll highway is reflected in the RTP, a non-toll variation is included to facilitate the evaluation of toll-related impacts, particularly with respect to Environmental Justice populations, per Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority and Low Income Populations. The differences associated with the project build alternatives are reflected within the designs of SR-11, particularly with respect to the locations and configurations of interchanges, underpasses, and overpasses. Figure 2-2, *Comparative Overview of the Project Build Alternatives,* compares the major features of the build alternatives. Briefly, the alternatives may be differentiated as follows:

- The Two Interchange Alternative includes two interchanges that would be constructed along SR-11 at Enrico Fermi Drive and Siempre Viva Road, as well as an overcrossing at Alta Road and an undercrossing at Sanyo Avenue. The interchange at Enrico Fermi Drive would be a full interchange. Two design options are considered for the interchange at Siempre Viva Road; a half interchange ("baseline" design) and a full interchange (variation).
- The One Interchange Alternative would incorporate a single full interchange at Alta Road, approximately 1.4 miles east of the SR-905/SR-125/SR-11 Interchange. This alternative would also include overcrossings at Enrico Fermi Drive and Siempre Viva Road, and an undercrossing at Sanyo Avenue.
- The No Interchange Alternative would have no interchanges along the proposed alignment of SR-11. Overcrossings would be built at Enrico Fermi Drive, Alta Road and Siempre Viva Road, and an undercrossing would be built at Sanyo Avenue.

Several potential designs are under consideration for the SR-905/SR-11/SR125 Interchange. The original "baseline" design includes the eastbound SR-905 to eastbound SR-11 connector and the westbound SR-11 to westbound SR-905 connector (as well as an exit ramp to La Media Road from the westbound connector). Variations under consideration in this EIR/EIS for this interchange include the SR-125 Connector Variation (which would provide a flyover to connect southbound SR-125 to eastbound SR-11) and the SR-905/SR-125/SR-11 Full Interchange Variation (which, in addition to the flyover connector, would also add connectors from westbound SR-905 to eastbound SR-11 and from westbound SR-11 to eastbound SR-905). Finally, a variation is considered that would provide a 46-foot median between the existing buildings east of Sanyo Avenue, instead of the proposed "baseline" 22-foot median in this segment of the project. High Occupancy Vehicle (HOV) lanes are not included in the project design at this time, because of the higher priority of separating vehicles to meet POE security and inspection requirements, but other Transportation Systems Management/Transportation Demand Management (TSM/TDM) measures are incorporated into all of the build alternatives and variations. The project will accommodate pedestrian pickup/dropoff, and there will be no toll charged for pedestrians and bicyclists to cross the border. The project also includes a site for a potential future transit center (to be constructed by others).

SR-11 is proposed to be constructed and operated as a toll facility under all of the build alternatives, with SANDAG as the toll authority under state legislation (SB 1486). The proposed toll system is currently anticipated to include toll collection in both directions and the use of "smart technology" such as FasTrak, although additional toll-related options are still under evaluation. A Traffic and Revenue Study currently underway will determine toll pricing, but it is anticipated that tolls would vary by vehicle type, and variable congestion pricing would be implemented for both commercial and passenger vehicles. This system is intended to provide a financial incentive to encourage accessing the POE during non-peak hours, thereby reducing peak hour congestion. Preliminary cost projections provided in the SANDAG/Caltrans *State Route 11 Toll Road and East Otay Mesa Port of Entry Financial Feasibility Study* suggest that anticipated non-peak to peak hour tolls could range from approximately $32 to $47.30 for commercial vehicles, and $1.60 to $7 for passenger vehicles (SANDAG/Caltrans 2006a). Competitive pricing for transit vehicles may also be employed to encourage transit ridership and reduce passenger vehicle traffic, at the discretion of SANDAG, which would be the responsible tolling agency. Pedestrians and bicycles crossing the border but not accessing SR-11 would not be subject to a toll. As noted above, a variation of the build alternatives in which vehicles are not subject to a toll (the No Toll Variation) is also analyzed in this EIR/EIS, to facilitate socioeconomic and environmental justice considerations related to a tolled facility.

The project alternatives and variations are described below, focusing first on the features of SR-11 that all of the alternatives share in common; then describing the unique aspects of SR-11 that define each of the alternatives and variations; and finally, describing the POE and CVEF, which would also be common to all of the build alternatives.

## State Route 11

### Common Major SR-11 Features Under All Build Alternatives

Under each of the build alternatives, SR-11 would be constructed as a 2.1-mile, four-lane toll highway, with two lanes in each direction, plus auxiliary lanes and connectors. It would extend east from the vicinity of Harvest Road (near the future SR-125/SR-905 Interchange currently under construction) for approximately 1.5 miles, before curving to the southeast near Alta Road and continuing for approximately 0.6 mile to connect with the POE/CVEF site. To link SR-11 to SR-905, it would be necessary to modify the approved design of the eastern portion of SR-905 that is currently under construction. SR-11 would be located midway between Otay Mesa Road and Airway Road for most of its length, and would cross four local surface streets: Sanyo Avenue, Enrico Fermi Drive, Alta Road, and Siempre Viva Road. Undercrossings, overcrossings or interchanges would be provided at each of these locations, depending on the project alternative.

Traffic studies have indicated that a four-lane facility would be adequate to accommodate projected traffic through at least 2035. The median would be 22 feet wide beginning at Sanyo Avenue, to minimize impacts to nearby buildings, before widening to a 62-foot median width leading up to the POE. The proposed 62-foot median width in the eastern portion of SR-11 is intended to make SR-11 adaptable for potential safety and security needs, and to provide the flexibility to construct additional lanes on approach to the POE, if these are found to be necessary in the future to meet future vehicle inspection requirements. This additional right-of-way would help ensure access to the new POE by emergency responders, facilitate evacuation of the POE if necessary, or allow southbound traffic to be turned around if the POE had to be closed for emergency security concerns. Concrete barriers (three feet tall) would extend along each side of the roadway in the Sanyo Avenue area, and an additional three-foot-tall concrete barrier would extend along the median. Although the number of lanes through this area would vary by alternative, all of the build alternatives would include the 22-foot median in the Sanyo Avenue area. A variation of the build alternatives incorporating a 46-foot median instead of the 22-foot median is presented later in this chapter.

Modifications to SR-905 to accommodate its connections with SR-11 would occur between the SR-905/SR-125/SR-11 Interchange and the SR-905/Britannia Boulevard Interchange, and would be entirely within the existing R/W for SR-905. These modifications would include the construction of two-lane connectors between the two highways, the addition of an auxiliary lane between La Media Road and the eastbound SR-11 connector, and the tapering of these connectors to match SR-905 in the vicinity of the Britannia Boulevard Interchange. On the westbound side of SR-905, the proposed project would also construct a ramp from SR-11 to tie into the planned SR-905 and SR-125 off-ramps to La Media Road.

At the Sanyo Avenue undercrossing, SR-11 would be approximately 26 feet above Sanyo Avenue, permitting the local road to pass under the new highway, but allowing no interchange of traffic between them. From Sanyo Avenue eastward, SR-11 would pass between existing industrial buildings and would be supported by retaining walls for a distance of approximately 1,250 feet as it slopes gradually downward to meet the surrounding grade. The walls and headwall structure at Sanyo Avenue would be approximately 26 and 22 feet high on the south and north sides of SR-11, respectively, with the highest portions of the walls located nearest to Sanyo Avenue. In this area, the project would require partial acquisitions of existing developed properties. This design is intended to avoid the use of extensive fill slopes to support the elevated roadway, which would have resulted in additional acquisition of existing developed industrial property along both sides of SR-11 in this area. Proposed SR-11 in this area would be similar to the local access connection between SR-905 and Enrico Fermi Drive that was approved as part of the SR-905 project. While an undercrossing would be constructed at Sanyo Avenue under each of the build alternatives, the width of roadway (number of lanes) would vary depending upon the alternative.

The above features would be common to all of the build alternatives. The unique characteristics of each alternative are described below.

**Two Interchange Alternative – Additional Major Features**

The Two Interchange Alternative would entail the construction of interchanges along SR-11 at Enrico Fermi Drive and Siempre Viva Road, as well as an overcrossing at Alta Road. An undercrossing at Sanyo Avenue would be as described above; it would include two travel lanes and an auxiliary lane in each direction.

The proposed interchange at Enrico Fermi Drive would have local access ramps connecting to both eastbound and westbound SR-11 (and automated toll facilities along the westbound on-ramp and eastbound off-ramp). This interchange would be located approximately one mile east of the SR-905/SR-125/SR-11 Interchange, and approximately one mile west of the proposed interchange at Siempre Viva Road. The proposed Siempre Viva Road Interchange under this alternative would be a half interchange, with separate ramps for passenger-only and commercial traffic into and out of the new POE/CVEF. The interchange would not provide access from Siempre Viva Road to the POE via eastbound SR-11, nor would it provide public access to Siempre Viva Road for travelers exiting the POE via westbound SR-11. (A controlled-access road just east of the interchange would permit entry for POE/CVEF employees only.) Alta Road would be elevated on a structure to pass over SR-11, with no interchange of traffic between the highway and the local road.

Siempre Viva Road Full Interchange Variation

A variation on the Two Interchange Alternative involving construction of a full interchange at Siempre Viva Road is also under consideration. This variation would include separate ramps for commercial-only traffic and for passenger-only traffic to provide access from Siempre Viva Road to the POE; and a ramp for northbound passenger-only traffic from the POE to access Siempre Viva Road. Direct access would be provided for commercial-only traffic to Siempre Viva Road from the CVEF.

**One Interchange Alternative**

Under the One Interchange Alternative, proposed SR-11 would be constructed with a single, full interchange at Alta Road, approximately 1.4 miles east of the SR-905/SR-125/SR-11 Interchange. An undercrossing at Sanyo Avenue would be as described above; it would include only two travel lanes (no auxiliary lane). SR-11 would pass under Enrico Fermi Drive, with no interchange of traffic between the highway and the local road. In contrast to the Two Interchange Alternative, SR-11 at Siempre Viva Road would be constructed as an overcrossing, rather than an interchange. The overcrossing would include separate ramps for passenger-only and commercial traffic into and out of the new POE/CVEF, as described for the Two Interchange Alternative, but no permanent direct access would be provided between SR-11 and Siempre Viva Road.

The One Interchange Alternative would have a slightly smaller footprint between Sanyo Avenue and Enrico Fermi Drive than would the Two Interchange Alternative, due to the elimination of the Enrico Fermi Drive Interchange and its associated auxiliary lanes.

**No Interchange Alternative**

Under the No Interchange Alternative, no interchanges would be constructed along proposed SR-11; all traffic accessing SR-11 from either SR-905 or SR-125 would have to proceed to the POE. An undercrossing structure would be provided at Sanyo Avenue, and overcrossings would be constructed at

Enrico Fermi Drive, Alta Road, and at Siempre Viva Road. The overcrossing at Alta Road would be similar to that described for the Two Interchange Alternative, while overcrossings at Enrico Fermi Drive and Siempre Viva Road would be similar to those described for the One Interchange Alternative. As in the case of the One Interchange Alternative, the No Interchange Alternative would have a slightly smaller footprint between Sanyo Avenue and Enrico Fermi Drive than would the Two Interchange Alternative. This condition is based on the elimination of the Enrico Fermi Drive Interchange and its associated auxiliary lanes, with the design of the Sanyo Avenue undercrossing to be similar to that described above for the One Interchange Alternative.

**Variations on the Build Alternatives**

A number of design and operational variations, applicable to any of the build alternatives, are being evaluated, as outlined below.

No Toll Variation

The No Toll Variation would involve SR-11 operating as a freeway instead of a toll highway. The principal design difference under this variation would be the lack of toll-related structures, such as toll administration and FasTrak facilities.

46-foot Median Variation

Under this variation, the SR-11 median would be 46 feet wide instead of 22 feet wide in the vicinity of Sanyo Avenue.

SR-125 Connector Variation

Under the SR-125 Connector Variation, the southbound SR-125 to eastbound SR-11 connector would be added to the interchange. A local connector ramp from Enrico Fermi Drive to northbound SR-125 was approved under the SR-905 project; all of the proposed project build alternatives assume a similar direct connector from westbound SR-11 to northbound SR-125. The addition of the southbound SR-125 to eastbound SR-11 connector under this variation would complete the direct link between the two highways.

SR-905/SR-125/SR-11 Full Interchange Variation

The SR-905/SR-125/SR-11 Full Interchange Variation would include the connector described under the SR-125 Connector Variation, as well as two additional connectors: westbound SR-11 to eastbound SR-905, and westbound SR-905 to eastbound SR-11. This would provide full connectivity among the three highways.

**Otay Mesa East POE**

GSA is currently preparing a Program Development Study (PDS) to provide detailed design information for the proposed Otay Mesa East POE. For purposes of the Tier II EIR/EIS analysis, a conceptual development plan has been prepared by Caltrans in cooperation with GSA, based on a related GSA feasibility study (GSA 2008) and a number of current design assumptions. After completion of the PDS, the Tier II EIR/EIS conclusions will be reevaluated to determine if additional environmental analysis is necessary.

The proposed POE would occupy approximately 106 acres, and would accommodate northbound and southbound commercial and passenger traffic, as well as pedestrians and bicycles. The POE site would be accessed from the north by SR-11. From the south, entry would be through the proposed Otay II POE on

the Mexico side of the border. Facilities would likely include inspection lanes, booths and canopies, a commercial vehicle and cargo inspection system, commercial import inspection building and docks, bulk storage inspection bins, a bird quarantine building, a commercial truck impound lot and a seizure vault. Other non-commercial facilities would include the main building, pedestrian and bicycle facilities, and a general parking lot. The proposed overall POE footprint would include space to accommodate a potential future transit center site adjacent to the POE (to be designed and constructed by others). It is currently anticipated that a future transit center would encompass an approximately two-acre rectangular site in the vicinity of the western POE boundary, with sufficient space available to accommodate up to a five-acre transit center site if necessary.

**Commercial Vehicle Enforcement Facility**

The proposed project includes a new CVEF, which would occupy approximately 23 acres east of SR-11 along the northern POE boundary. After receiving clearance to enter the U.S. at the POE, northbound commercial vehicles would be routed into the CVEF facility for a safety/weight inspection by the CHP prior to being released onto the regional roadway system. The CVEF design is expected to be similar to the CVEF at the existing Otay Mesa POE, with anticipated facilities to include an approximately 7,900-square foot main building, commercial vehicle scales, and inspections bays. An estimated 50 government employees are expected to work at the CVEF, with up to 20 of them on site at any given time. It is expected that hours of operation for the CVEF would be compatible with the proposed POE's schedule for processing commercial vehicles.

**No Build Alternative**

Under the No Build Alternative, none of the project components described under the build alternatives would be constructed, including the 2.1-mile SR-11 highway (and associated interchanges, under/overcrossings, connectors, SR-905 modifications, and related facilities), the Otay Mesa East POE (including the potential future transit center site), and the CVEF. The existing Otay Mesa POE and associated CVEF, as well as the existing San Ysidro POE, would remain open and operational.

**Alternatives Considered but Eliminated from Further Discussion**

In addition to the Tier II alternatives described above for SR-11 (which are based on the Phase I Western Alternative), the Project Team considered the Central Alternative and the No Action Alternative in the Phase I analysis (Caltrans 2008a). In 2000, the Project Study Report (PSR) for SR-11 (Caltrans 2000) considered not only the Western, Central and No Action Alternatives, but also an Eastern Alternative and a Local Road Alternative. The Central and Eastern alternatives would have extended farther eastward from Harvest Road and consequently would have entailed a greater footprint, as well as additional environmental impacts. A TSM/TDM Only Alternative was also evaluated as part of the Tier II analysis, which would have included TSM/TDM measures at existing POEs only or at a new proposed POE without SR-11. A number of design alternatives for the proposed CVEF were also considered. An analysis of why the rejected alternatives were eliminated from further discussion is presented in Section 2.3 of this EIR/EIS.

**Project Construction Costs**

The anticipated costs for R/W acquisition and construction of each build alternative and variation are presented in tabular form in Chapter 2. The build alternatives (without variations) would range in cost from approximately $519 million for the No Interchange Alternative to $537 million for the Two Interchange Alternative. Implementation of the Siempre Viva Road Full Interchange Variation with the Two Interchange Alternative would increase the cost of this alternative to approximately $558 million. The SR-125 Connector Variation or SR-905/SR-125/SR-11 Full Interchange Variation would add an estimated $25 million or $46 million, respectively, to the cost of any of the build alternatives. The No Toll Variation

would reduce project implementation costs by approximately $6 million for any build alternative. The 46-foot median variation would increase property acquisition and construction costs by an estimated $ 1.7 million.

## S.4 JOINT CEQA/NEPA DOCUMENT

The proposed project is a joint project by Caltrans and the FHWA, and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under CEQA and FHWA is the lead agency under NEPA.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA, because NEPA is concerned with the significance of the project as a whole. One of the most commonly seen joint document types is an EIR/EIS.

Following receipt of public comments on the Draft EIR/EIS and circulation of the Final EIR/EIS, Caltrans and FHWA will be required to take actions regarding the environmental document. Caltrans will determine whether to certify the EIR and issue Findings and a Statement of Overriding Considerations under CEQA and FHWA will determine whether to issue a Record of Decision (ROD) under NEPA.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans District 11, Attn: Sandra Lavender, Environmental Analysis Branch A, 4050 Taylor Street, MS 242, San Diego, CA 92110; (619) 688-3135 Voice, or use the California Relay Service TTY number, 711.

## S.5 ENVIRONMENTAL CONSEQUENCES

Table S-1 summarizes project impacts by alternative. Detailed discussion and analysis of project impacts are provided in Chapter 3.0 of this EIR/EIS and the associated technical studies. A summary of associated avoidance, minimization and mitigation measures are presented in Section S-6, following the impact discussion.

**Table S-1**
**SUMMARY OF POTENTIAL IMPACTS – BY ALTERNATIVE/VARIATION**

| | Two Interchange | One Interchange | No Interchange | Design/Operational Variations | | | | | No Build |
|---|---|---|---|---|---|---|---|---|---|
| | | | | No Toll | 46-foot Median | SR-125 Connector | SR-905/ SR-125/ SR-11 Full Interchange | Siempre Viva Road Full Interchange | |
| **HUMAN ENVIRONMENT** | | | | | | | | | |
| **Land Use Conversions to Transportation Uses** | | | | | | | | | |
| Undeveloped land designated for industrial use | 226.5 acres | 227.4 acres | 214.5 acres | No additional land use conversions | No additional land use conversion | No additional land use conversion | No additional land use conversion | 20.2 acres additional land use conversion | No land use conversions |
| Industrial developed land | 2.9 acres | 2.0 acres | 2.0 acres | No additional land use conversions | 0.7 acre additional land use conversion | No additional land use conversion | No additional land use conversion | No additional land use conversion | No land use conversions |
| Graded land used for truck storage | 22.0 acres | 10.5 acres | 10.7 acres | No additional land use conversions | No additional land use conversion | No additional land use conversion | No additional land use conversion | No additional land use conversion | No land use conversions |
| Vehicle auction yard (temporary permit) | 5.6 acres | 13.6 acres | 4.8 acres | No additional land use conversions | No additional land use conversion | No additional land use conversion | No additional land use conversion | No additional land use conversion | No land use conversions |
| Otay Water District land | 0.3 acres | 0.3 acres | 0.3 acres | No additional land use conversions | No additional land use conversion | No additional land use conversion | No additional land use conversion | No additional land use conversion | No land use conversions |
| CBP undeveloped land | 7.4 acres | 7.4 acres | 7.4 acres | No additional land use conversions | No additional land use conversion | No additional land use conversion | No additional land use conversion | No additional land use conversion | No land use conversions |
| **Total** | 264.7 acres | 261.2 acres | 239.7 acres | No additional land use conversions | 0.7 acre additional land use conversion | No additional land use conversion | No additional land use conversion | 20.2 acres additional land use conversion | No land use conversions |

**Table S-1 (cont.)**
**SUMMARY OF POTENTIAL IMPACTS – BY ALTERNATIVE**

| | Two Interchange | One Interchange | No Interchange | Design/Operational Variations | | | | | No Build |
|---|---|---|---|---|---|---|---|---|---|
| | | | | No Toll | 46-foot Median | SR-125 Connector | SR-905/ SR-125/ SR-11 Full Interchange | Siempre Viva Road Full Interchange | |
| **Consistency with Federal, State, Regional, and Local Plans and Programs** | Consistent | | | Inconsistent with regional plans | Consistent | | | | Inconsistent with local / regional plans |
| **Growth** | No substantial growth impacts within the immediate socioeconomic study area. Potential to influence growth in goods movement and services within the larger southern California region based on the expansion of border crossing capacity, removing a current obstacle to such growth. Current economic conditions are also constraining growth and there is capacity in the system to accommodate growth in the near term. On balance the proposed project contribution to growth in the region is seen as positive. | | | | | | | | No impact |
| **Community Cohesion** | No impact | | | | | | | | |
| **Community Character** | Impacts from visual effects of retaining walls | | | No additional impacts | Additional impacts (retaining walls) | No additional impacts | No additional impacts | No additional impacts | No immediate impacts |
| **Relocations** | No substantial impacts (No residential property acquisitions or relocations) | | | | | | | | No impact |
| **Property Acquisition** | 245.15 acres | 241.71 acres | 220.49 acres | No additional acquisitions | 0.7 acre additional parcel acquisition | No additional acquisitions | No additional acquisitions | 20.2 acres additional parcel acquisition | No acquisitions |
| **Property Value Impacts** | Minor benefit | | | | | | | | No benefit |
| **Property Tax Impacts** | $282,868 tax loss per year | $290,437 tax loss per year | $240,456 tax loss per year | No additional tax loss | Additional tax loss of $8,175 to 8,181 per year | No additional tax loss | No additional tax loss | Additional tax loss of $8,175 per year | No impact |
| **Sales Tax Impacts** | $4.5 million/7.6 million generated by 2015/2030 | | | $0.4 million/ 0.5 million generated by 2015/2030 | $4.5 million/7.6 million generated by 2015/2030 | | | | No tax generation |

**Table S-1 (cont.)**
**SUMMARY OF POTENTIAL IMPACTS – BY ALTERNATIVE**

| | Two Interchange | One Interchange | No Interchange | Design/Operational Variations | | | | | No Build |
|---|---|---|---|---|---|---|---|---|---|
| | | | | No Toll | 46-foot Median | SR-125 Connector | SR-905/ SR-125/ SR-11 Full Interchange | Siempre Viva Road Full Interchange | |
| **Environmental Justice** | Potential benefit | | | No additional impacts as a result of design/operational variations | | | | | No benefit |
| **Utilities/Services** | Disruption of existing utilities and services | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Traffic** | | | | | | | | | |
| Construction | Temporary road closures | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| Operational Performance | Adverse cumulative effects to select freeway segments, roadway segments and intersections; varies by alternative | | | Generally similar to baseline alternatives, with various exceptions; varies by alternative and variation | | | | | No impact |
| Local Benefits | Increased connectivity / accessibility and improved performance over No Build (Two Interchange Alternative – greatest increase; No Interchange – least increase) | | | Higher accessibility | No additional impact | Higher accessibility with more connectivity between freeways and local roads | | | No benefit |
| Pedestrian/Bicycle | Pedestrian and bicycle facilities would accommodate new demand | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Visual** | Visual change from undeveloped grassland and open space to a more urbanized landscape transected by a large expanse of concrete, along with associated interchanges, walls, and grading, and a POE and CVEF with buildings, roadways, and associated facilities. Specific project-related visual impact identified in Sanyo Avenue area due to retaining walls. A cumulative impact to the visual environment of the EOMSP is identified due to development of the proposed project plus a number of active industrial project applications surrounding the proposed project. | | | Slight reduction in impact from toll gantries | Increased impact (retaining walls) | No substantial additional impact | No substantial additional impact | No substantial additional impact | No impact |
| **Cultural Resources** | No impacts to known resources | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **PHYSICAL ENVIRONMENT** | | | | | | | | | |
| **Hydrology/Floodplain** | Not substantial with avoidance and minimization | | | No additional impacts as a result of design/operational variations | | | | | No impact |

**Table S-1 (cont.)**
**SUMMARY OF POTENTIAL IMPACTS – BY ALTERNATIVE**

| | Two Interchange | One Interchange | No Interchange | Design/Operational Variations | | | | | No Build |
|---|---|---|---|---|---|---|---|---|---|
| | | | | No Toll | 46-foot Median | SR-125 Connector | SR-905/ SR-125/ SR-11 Full Interchange | Siempre Viva Road Full Interchange | |
| **Water Quality/Storm Water** | Not substantial with avoidance and minimization | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Geology/Soils** | No substantial impacts | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Paleontology** | Potential destruction of buried fossil remains during grading and excavation | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Hazardous Waste/Materials** | Potential for encountering hazardous materials during construction/operation | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Air Quality** | Potential impacts associated with particulate matter during construction | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Noise** | | | | | | | | | |
| Operation | Traffic noise would exceed NAC at Southwestern College outdoor track | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| Construction | Not substantial with compliance with Caltrans standard specifications | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Energy** | Reduction in long-term energy use due to reduced idling time at POEs (except under No Interchange Alternative) | | | Less energy use reduction | No additional impacts as a result of design/operational variations | | | | No energy use reduction |
| **BIOLOGICAL ENVIRONMENT** | | | | | | | | | |
| **Natural Communities** [1] | | | | | | | | | |
| Vernal Pool | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Vernal Pool Watershed | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Basin with Fairy Shrimp | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Freshwater Marsh | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Mule Fat Scrub – Disturbed | 0.42 | 0.42 | 0.42 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Disturbed Wetland | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Diegan Coastal Sage Scrub | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Native Grassland | 0.2 | 0.2 | 0.2 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Non-native Grassland | 179.8 | 184.4 | 173.7 | No additional impacts as a result of No Toll, 46-foot Median, SR-125 Connector, or SR-905/SR-125/SR-11 Full Interchange variations | | | | 19.6 additional acres | No impact |

**Table S-1 (cont.)**
**SUMMARY OF POTENTIAL IMPACTS – BY ALTERNATIVE**

| | Two Interchange | One Interchange | No Interchange | Design/Operational Variations | | | | | No Build |
|---|---|---|---|---|---|---|---|---|---|
| | | | | No Toll | 46-foot Median | SR-125 Connector | SR-905/ SR-125/ SR-11 Full Interchange | Siempre Viva Road Full Interchange | |
| Non-native Grassland – Disturbed | 0.00 | 0.00 | 0.00 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Existing Grassland Restoration Area | 3.2 | 3.2 | 3.2 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Tamarisk Scrub | 0.08 | 0.08 | 0.08 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Non-native Vegetation | 0.2 | 0.3 | 0.2 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Disturbed Habitat | 31.31 | 28.51 | 26.31 | No additional impacts as a result of design/operational variations | | | | 0.6 additional acre | No impact |
| Developed | 12.2 | 13.2 | 5.2 | No additional impacts as a result of design/operational variations | | | | | No impact |
| Wildlife Corridors/ Habitat Fragmentation | Minimal impacts | | | | | | | | No impact |
| Indirect Impacts to Natural Communities | Temporary construction impacts | | | | | | | | No impact |
| **Wetlands and Other Waters**[2] | | | | | | | | | |
| CDFG Jurisdictional Areas (acres) | 0.68 | 0.69 | 0.67 | No additional impacts as a result of design/operational variations | | | | Additional 0.3 acre | No impact |
| USACE Jurisdictional Areas (acres) | 0.21 | 0.20 | 0.20 | No additional impacts as a result of design/operational variations | | | | Additional 0.3 acre | No impact |
| USACE Jurisdictional Drainages (Linear Feet) | 4,521 | 4,407 | 4,391 | No additional impacts as a result of design/operational variations | | | | Additional 641 linear feet | No impact |
| **Plant Species** | | | | | | | | | |
| Small-flowered Morning Glory | Up to 20 patches | | | No additional impacts as a result of design/operational variations | | | | 2 additional patches | No impact |
| Variegated Dudleya | Five Locations | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| San Diego Barrel Cactus | 16 individuals | | | No additional impacts as a result of design/operational variations | | | | 1 additional individual | No impact |
| Decumbent Goldenbush | 160 individuals | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| San Diego Marsh-elder | Up to 43 individuals | | | No additional impacts as a result of design/operational variations | | | | 11 additional individuals | No impact |
| **Animal Species** | | | | | | | | | |
| Non-listed Species | No substantial impacts | | | No additional impacts as a result of design/operational variations | | | | | |
| Burrowing Owl | 12 locations | 14 locations | 12 locations | No additional impacts as a result of design/operational variations | | | | | No impact |

**Table S-1 (cont.)**
**SUMMARY OF POTENTIAL IMPACTS – BY ALTERNATIVE**

| | Two Interchange | One Interchange | No Interchange | Design/Operational Variations | | | | | No Build |
|---|---|---|---|---|---|---|---|---|---|
| | | | | No Toll | 46-foot Median | SR-125 Connector | SR-905/ SR-125/ SR-11 Full Interchange | Siempre Viva Road Full Interchange | |
| **Threatened and Endangered Species** | | | | | | | | | |
| San Diego Fairy Shrimp | 111.5 acres critical habitat | | | No additional impacts as a result of design/operational variations | | | | | No impacts |
| Quino Checkerspot Butterfly | 3 locations and 4.2 acres critical habitat | | | No additional impacts as a result of design/operational variations | | | | | No impact |
| **Invasive Species** | No substantial impact | | | | | | | | No impact |

[1] Total acreage includes 0.91 acre of impacts associated with easements outside of the proposed project R/W (described above), which are considered permanent impacts.
[2] All reported impact numbers include 0.01 acre and 165 linear feet of impact to Drainage B, associated with a proposed easement outside project R/W. Impacts associated with the easement would be considered permanent.

**Environmental Consequences Remaining Substantial After Mitigation**

Traffic

Section 3.8 of this EIR/EIS concludes that operation of the new Otay Mesa East POE would result in cumulative traffic impacts to select freeway segments, roadway segments and intersections in the project study area, identified in Section 3.8.3. A number of measures are described in Section 3.8.4 that could reduce these traffic impacts, such that operations would be no worse than under the No Build Alternative. These measures should be considered in future transportation planning efforts for the study area in coordination with local entities, as SR-11 and the Otay Mesa East POE have been reflected in the EOMSP for many years. Because the implementation of these measures is beyond the control or responsibility of Caltrans, however, they are not proposed as part of the project. Refer to Section 3.8.4 for a description of these measures.

Visual

Just east of Sanyo Avenue, the project would construct up to approximately 26-foot high retaining walls in close proximity to existing buildings, resulting in an adverse project-level impact on the visual environment. The project's visual impact at this location, as well as its contribution to the cumulative visual impact within the Sanyo Avenue area would be minimized through typical Caltrans landscape and architectural design measures, as listed in Section 3.9. This direct project impact would therefore be substantial but mitigated.

Cumulatively, however, the proposed project in combination with other anticipated development in eastern Otay Mesa would considerably change the visual environment of the area from open space to urban uses, and would contribute to cumulative visual impacts within the EOMSP area following project implementation. While the mitigation measures listed in Section 3.9 would serve to avoid and minimize project-specific impacts, cumulative impacts would remain substantial, adverse, unavoidable, and unmitigable.

Noise

Noise levels would exceed the Noise Abatement Criteria (NAC) at one location with sensitive receptors (the Southwestern College outdoor recreation facilities). The analysis of noise impacts and mitigation, however, found that a noise barrier, while technically feasible, would not be economically reasonable. Therefore, substantial, adverse noise levels would remain at this location.

## S.6 CUMULATIVE IMPACTS

Resources substantially impacted by the proposed project and in poor or declining health include transportation/traffic (Section 3.8), visual/aesthetics (Section 3.9), hazardous waste/materials (Section 3.15), natural communities (Section 3.19), wetlands and other waters (Section 3.20), plant species (Section 3.21), animal species (Section 3.22), and threatened and endangered species (Section 3.23). It should be noted with respect to cumulative traffic impacts that, although the project would improve traffic conditions in the form of border congestion, there would nonetheless be adverse cumulative traffic impacts to a number of local freeway/roadway segments and intersections, because the addition of a POE is projected to attract traffic away from the San Ysidro POE and increase traffic on I-805 and SR-11. Projected traffic volumes would exceed the planned roadway capacities in East Otay Mesa, and adjustments to local circulation plans may be needed to accommodate these higher volumes (refer to Section 3.27).

For each of these issues, mitigation or minimization measures proposed for the project, together with the mitigation measures required for other cumulative projects in the area, would reduce the overall cumulative impact to the affected resources. Impacts to hazardous waste/materials, natural communities, wetlands and other waters, plant species, animal species, and threatened and endangered species would be reduced to the extent that these impacts would no longer be substantial. Cumulative impacts to visual resources and local traffic circulation would remain substantial and adverse.

## S.7 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Many avoidance and minimization measures, including best management practices, have been incorporated into the project design to reduce impacts to resources. Mitigation would off-set impacts to resources that result from the project. For some resources, permit requirements require mitigation. Avoidance and minimization measures, and proposed mitigation measures are discussed in detail in Chapter 3. Avoidance, minimization and mitigation measures are not proposed regarding land use, or environmental justice.

### Community Cohesion and Character

Impacts to community character would be mitigated through measures identified under Visual/Aesthetics pertaining to visual effects of the retaining walls.

### Relocations and Property Acquisitions

Impacts relating to relocations or property acquisitions would be avoided, minimized or mitigated through conformance with Caltrans' Relocation Assistance Program (RAP), which is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24.

### Utilities and Emergency Services

Project design and construction would be required to minimize utility disruption in conformance with Public Utilities Code, Section 12808. In addition to standard notification and coordination requirements, the following specific measures would be required to maintain utilities and emergency response services:

- Caltrans and GSA would coordinate with the responsible utilities companies regarding any necessary relocation of the existing fuel line that crosses the northeast corner of the POE/CVEF and the 30-inch diameter gas pipeline in the southern portion of the POE site
- Interior and exterior storage areas for recyclables and green waste and adequate recycling containers would be provided within public areas
- Most construction and demolition waste (including but not limited to soil, vegetation, concrete, lumber, metal and cardboard) would be reused or recycled
- Disruption to emergency response service on local roads would be minimized through implementation of a construction traffic control plan to provide for passage of emergency vehicles. Details would be developed during final design
- Disruption of the U.S. Border Patrol activities would be minimized by cooperation with the agency to facilitate its activities while still realizing the project purpose and need

### Traffic

For locations where potential future significant impacts would likely occur following project implementation, measures to avoid or minimize the affected conditions such that operations would be no

worse than with the No Build Alternative should be considered in future planning of the transportation system in the traffic study area.

The proposed project would implement SR-11 and the Otay Mesa East POE, which have been reflected in the EOMSP for many years. The traffic analysis provides guidance as to the types of modifications that would be necessary to achieve acceptable LOS in the region in 2035, and demonstrates that feasible measures exist. The implementation of such measures is beyond the control or responsibility of Caltrans, however, and therefore, is not proposed as part of the project.

**Visual**

Impacts to visual resources would be mitigated through development and implementation of a landscape concept plan for highway planting, measures to reduce the visual impact of retaining walls (such as surface treatments and plantings), architectural features that correspond to the landscape concept plan, landscaping at median and edge barriers, grading to approximate the appearance of natural topography, and integrated aesthetic features associated with lighting, signage, fencing and drainage facilities.

**Cultural Resources**

Unanticipated subsurface discoveries during construction are not likely. The following actions to avoid, minimize or mitigate impacts to any unknown resources that might be encountered during construction serve as precautionary measures:

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the District Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

**Hydrology and Floodplains**

A number of avoidance and minimization measures related to hydrologic and hydraulic issues have been identified for all three build alternatives, including the use of appropriate drainage facilities such as inlets, pipes, channels/ditches, basins and cross drains. Final drainage facilities will be determined during the project design phase, as part of detailed hydrology/hydraulic reports to be prepared based on final project design. Specifically, such analyses encompass appropriate design, sizing, and location of proposed storm drain facilities, as well as continued consultation with applicable federal, state, and local agencies regarding issues including watershed development, storm drain design/capacity, and regulatory conformance. Implementation of the applicable conclusions and recommendations/requirements identified in the detailed project hydrology/hydraulic reports would avoid or effectively minimize all potential impacts related to hydrology and floodplain issues.

**Water Quality and Storm Water Runoff**

A number of associated avoidance and minimization measures are identified that would apply to all of the build alternatives, and would prevent or minimize potential short- and long-term water quality impacts and ensure project conformance with applicable regulatory requirements. Specifically, these measures

include the use of short-term BMPs to prevent or minimize potential impacts from construction operations, as well as design pollution prevention, treatment, and maintenance BMPs for potential long-term impacts.

**Geology/Soils/Seismic/Topography**

The project geotechnical investigations recommend that additional detailed subsurface exploration and laboratory testing be conducted prior to project design and construction which would generate specific recommendations for applicable geotechnical issues to ensure conformance with associated regulatory and design requirements. Recommendations may address seismic ground acceleration, liquefaction and seismic settlement, landslides and slope/excavation instability, instability of retaining walls and under/overcrossing structures, expansive soils, corrosive soils, and oversize materials, and would avoid or minimize any potential impacts related to geology, soils, seismicity, or topography for the build alternatives.

**Paleontology**

Paleontological mitigation would be carried out primarily during the project's construction phase. The mitigation program would consist of monitoring, fossil salvage and preparation, curation and report preparation.

**Hazardous Waste/Materials**

Avoidance, minimization and mitigation measures associated with hazardous waste and materials include additional assessment and planning, as necessary, based on conditions encountered during grading, excavation, and utility trenching; proper disposal of potentially contaminated soils, groundwater, or other potentially hazardous materials (especially agriculturally-related contaminants); implementation of appropriate worker and community health and safety measures in the event that potential hazards are identified within the project footprint; and compliance with applicable requirements regarding operational use, storage and transport of hazardous materials.

**Air Quality**

The following typical Caltrans practices to be employed during project construction would minimize the emission of fugitive dust, $PM_{10}$, and $PM_{2.5}$:

- 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
- Stabilize the surface of inactive stockpiles
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads
- Minimize unnecessary vehicular and machinery activities
- Street sweeping should be conducted where sediment is tracked from the job site onto paved roads, and should be performed immediately after soil-disturbing activities occur or off-site tracking of material is observed
- Revegetate disturbed land, including vehicular paths created during construction, to avoid future off-road vehicular activities
- 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 to minimize exposure to diesel particulates

### Noise

Noise barriers are the only form of abatement considered feasible for noise levels exceeding the NAC at the Southwestern College location during project operation. A 10-foot noise barrier (NB-1) would fulfill the criteria of providing a minimum 5 dBA of noise reduction at this location, per Caltrans guidelines. Implementation of barrier NB-1 would reduce noise levels below the NAC at this location for any of the build alternatives or variations. This noise barrier, however, while technically feasible, would not be reasonable from a cost perspective. Therefore, this mitigation measure would not be implemented, and substantial, adverse noise impacts would remain at this location.

Required contractor compliance with applicable local noise standards would avoid or minimize temporary adverse noise from construction. These standards include the following:

- All equipment should have sound-control devices that are no less effective than those provided on the original equipment. No equipment should have an unmuffled exhaust.
- As directed by Caltrans, the contractor should implement appropriate additional noise mitigation measures, such as changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

### Energy

A number of measures recommended by the California Attorney General (California Department of Justice 2008) could be implemented to minimize the effects of energy use by the project. These measures may include, but are not limited to efficient site and building design elements to minimize energy use for heating and cooling, lighting, and landscaping; recycling during construction and operation; and use of low or zero-emission vehicles and transit during construction and operation.

### Natural Communities

Impacts to natural communities would be avoided to large extent through the program-level selection of the Western Alternative and design measures to avoid impacts to sensitive resources.

Where unavoidable at the project level, impacts to natural communities would be mitigated through off-site acquisition. Native grassland would be mitigated at a 2:1 ratio, while non-native grassland and grassland restoration would be mitigated at a 1:1 ratio. Proposed mitigation for each alternative would result in 0.4 acre restoration of non-native grassland with native grassland and 3.2 acres of preservation of restoration grassland. The proposed mitigation for non-native grassland is 179.8 acres of preservation for the Two Interchange Alternative; 184.4 acres of preservation for the One Interchange Alternative; and 173.7 acres of preservation for the No Interchange Alternative.

### Wetlands and Other Waters

In a manner similar to avoidance of natural communities, impacts to wetlands and other waters were largely avoided through the Phase I selection of the Western Alternative. Where unavoidable at the project level, impacts to disturbed mule fat scrub would be mitigated at a ratio of 2:1 and impacts to U.S. Army Corps of Engineers (USACE) non-wetland Waters of the U.S./California Department of Fish and Game (CDFG) streambed would be mitigated at a ratio of 1:1. Therefore, compensatory mitigation is proposed at 1.09 acres for the Two Interchange Alternative; 1.10 acres for the One Interchange Alternative; and 1.08 acres for the No Interchange Alternative.

Proposed compensatory mitigation for impacts to jurisdictional drainages is via the restoration and preservation of USACE non-wetland WUS/CDFG streambed at Johnson Canyon, a drainage that extends onto one of the Lonestar parcels and supports jurisdictional features. A jurisdictional delineation would be necessary to determine the extent of USACE/CDFG jurisdiction on the Lonestar parcel. Proposed compensatory mitigation would consist of removal of non-native vegetation (primarily tamarisk), and implementation of native vegetation planting and seeding for up to approximately 4,521 linear feet of Johnson Canyon.

**Plant species**

Many potential impacts associated with variegated dudleya, San Diego Barrel Cactus and decumbent goldenbush were avoided through selection of the Western Alternative during Phase I. While impacts are unavoidable where these plant species occupy the necessary R/W, construction BMPs, installation of construction fencing and monitoring of construction limits would be conducted to avoid and/or minimize direct impacts to these special status plant species outside the proposed project R/W.

Impacts to variegated dudleya and San Diego Barrel Cactus individuals within the necessary R/W and easements would be mitigated through salvage and translocation to the Lonestar parcels (or equivalent mitigation parcel) of at least 80 percent of the population to be impacted. Impacts to decumbent goldenbush would be mitigated through planting of seed or container stock on the Lonestar parcels (or equivalent mitigation parcel).

Due to their low level of sensitivity, avoidance, minimization or mitigation is not proposed for small-flowered morning glory or San Diego marsh-elder; however, small-flowered morning glory would be preserved concurrently with preservation of non-native grassland on the Lonestar parcels where this species is present.

**Animal Species**

Brushing, grading, and clearing of vegetation would take place outside of the bird breeding season (February 1 through August 31) to avoid impacting nesting birds and violating the Migratory Bird Treaty Act. If construction activities occur during the breeding season, a pre-construction survey would be conducted to ensure that no nesting birds are present within the proposed work area. Should a nest site be located, then appropriate measures may include (but are not limited to) monitoring during grading and construction to ensure no impacts to the nest site, designating the location as an environmentally sensitive area, and delaying or restricting project activities until nesting and fledging is complete.

Impacts to non-listed, special status animal species would be offset by the proposed mitigation for non-native grassland impacts. These species would also benefit from the proposed preservation of other habitats (e.g., Diegan coastal sage scrub) as well as the restoration and enhancement of vernal pool habitat on the Lonestar parcels (or equivalent mitigation parcel).

For burrowing owls, a pre-construction survey to identify active burrows within the R/W and 250 feet beyond the R/W (where potential burrows could be) would be conducted no more than 30 days prior to initiation of construction. To minimize impacts to nesting burrowing owls, no disturbance would occur within 250 feet of any active burrow (including to any that occur outside the R/W) during the burrowing owl breeding season (February 1 through August 31) or until a qualified biologist determines that a burrow is no longer active. For each active burrow to be directly impacted outside the burrowing owl breeding season, a qualified biologist would implement passive relocation measures (installation of one-way doors) in accordance with CDFG regulations (CDFG 1995). Once all owls have vacated the burrows (after approximately 48 hours), a qualified biologist would oversee the excavation and filling of the burrows.

Impacts to burrowing owls are proposed to be mitigated through preservation of up to 199.4 acres of non-native grassland on the Lonestar parcels (or equivalent mitigation parcel). It is acknowledged that the Lonestar parcels support approximately 173 acres of non-native grassland, and that additional grassland may be required. Caltrans will consult with the resource agencies to devise an acceptable strategy to compensate for any shortage in the required mitigation area. To ensure suitable burrow opportunities are present, artificial burrows would be created in the preserved grassland at a 5:1 ratio for each burrow impacted (for a total of up to 70 artificial burrows). The artificial burrows would be constructed prior to the passive relocation. A Burrowing Owl Mitigation Plan would be prepared and submitted to CDFG for approval.

**Threatened and Endangered Species**

The proposed western edge of the POE was shifted to the east to avoid direct impacts to the vernal pool (and its watershed) that supports San Diego fairy shrimp, as well as habitat for the Quino Checkerspot Butterfly.

Proposed mitigation for direct impacts to 111.5 acres of San Diego fairy shrimp critical habitat is through preservation of San Diego fairy shrimp critical habitat on the western Lonestar parcels (or equivalent mitigation parcel). The final mitigation for critical habitat impacts would be negotiated during the Section 7 consultation with the USFWS.

The loss of Quino checkerspot butterfly and direct impacts to 4.2 acres of Quino checkerspot butterfly critical habitat are proposed to be mitigated through preservation and enhancement of historically occupied Quino checkerspot butterfly habitat on the Lonestar parcels (or equivalent mitigation parcel). The final mitigation for critical habitat impacts would be negotiated during the Section 7 consultation with the USFWS.

**Invasive Species**

Impacts associated with invasive species would be avoided and/or minimized through the use of landscaping and erosion control that do not use species on the state's noxious weed list, and through regular inspection of construction areas by a biological monitor. If invasive species are encountered during inspections, required measures could include cleaning of construction equipment and implementation of eradication strategies. In addition, all areas of temporary disturbance would be revegetated with native species or ornamental landscaping to limit colonization by invasive species, according to landscape plans reviewed by a qualified biologist.

## S.8 COORDINATION WITH PUBLIC AND OTHER AGENCIES

**Permits and Approvals Needed**

The following program-level permits, reviews and approvals were acquired during implementation of Phase I:

| Agency | Permit/Approval | Status |
|---|---|---|
| U.S. Department of State | Conditional Presidential Permit for the POE (included as Appendix A) | Approved |
| U.S. General Services Administration | Approval of preferred POE site alternative | Approved |

The following permits, reviews and approvals may be required for project-level implementation in Tier II, depending on identified project impacts:

| Agency | Permit/Approval | Status |
|---|---|---|
| U.S. Department of State | Full Presidential Permit for the POE | Pending |
| U.S. Fish and Wildlife Service | Endangered Species Act Section 7 Consultation for Threatened and Endangered Species | Pending |
| U.S. Army Corps of Engineers | Clean Water Act Section 404 Nationwide Permit for filling waters of the United States | Pending |
| California Regional Water Quality Control Board | (1) Clean Water Act Section 401 Water Quality Certification for discharge of dredge and fill materials into federal waters, or Waste Discharge Requirements for non-federal waters and/or other discharges; and (2) conformance with NPDES Caltrans Statewide Permit and/or Groundwater Extraction/Disposal Permit for the SR-11 and the POE/CVEF sites. | Pending |
| California Department of Fish and Game | California Fish and Game Code 1602 Agreement for Streambed Alteration<br>Section 2080.1 Agreement for Threatened and Endangered Species | Pending |
| State Water Resources Control Board | (1) Conformance with Statewide Caltrans NPDES Permit for SR-11 ; and (2) Conformance with NPDES General Construction Permit for the POE/CVEF sites | Pending |
| County of San Diego and City of San Diego | Freeway Agreement | Pending |
| International Boundary and Water Commission | Approval of project grading/drainage designs within IBWC jurisdiction along the border | Pending |
| California Transportation Commission | SR-11 Route Adoption | Pending |

## S.9 RELATED PROJECTS

The proposed project is one component of a general development effort in the border region to facilitate the planned growth and increased international trade. Other elements of this regional effort include the SR-905 and improvements to the POEs at Otay Mesa and San Ysidro.

SR-905: The SR-905 project was proposed to be constructed from I-805 to the Otay Mesa POE, for a distance of approximately 6.2 miles. Proposed SR-905 comprises six travel lanes and a wide median for possible future HOV lanes. The project includes local interchanges at Caliente Avenue, Heritage Road, Britannia Boulevard, and La Media Road, as well as a freeway-to-freeway interchange at SR-125. The project is currently under construction in four phases.

San Ysidro POE: The San Ysidro POE is the busiest land port in North America. The existing facility is to be replaced by a new port through implementation of a three-phase project. The new facility will consist of 210,000 square feet of building space, new security enhancements, primary and secondary inspection areas, 29 northbound vehicle lanes, two northbound bus lanes, six southbound vehicle lanes, pedestrian facilities, and a new southbound roadway to connect with Mexico's El Chaparral facility.

Otay Mesa POE: As the only commercial POE in the region, Otay Mesa is a major driver to the economies of southern California and Baja California. The commercial port is unable to keep pace with the local commercial needs due to staging, circulation and the inadequate capacity of inspection facilities. The proposed modernization project would reconfigure the existing POE through the purchase of adjacent property. The project would add primary and secondary inspection booths to the passenger side. On the commercial side, the project would add primary inspection, empty-truck inspection, and exit booths, and would relocate the hazardous materials import inspection area from the export compound to the commercial import compound.

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# Chapter 1
# Proposed Project

# CHAPTER 1.0 – PROPOSED PROJECT

## 1.1 INTRODUCTION

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), propose the construction of the following facilities in the County of San Diego (County): the new Otay Mesa East Port of Entry (POE); a new toll highway, State Route (SR-) 11, with connectors to SR-905 and associated modifications to SR-905; and a Commercial Vehicle Enforcement Facility (CVEF). The project analyzed in this document (referenced herein as the "proposed project" or "project") includes these three major elements in the general location shown on Figure 1-1, *Regional Location Map*.

Proposed SR-11 would begin at Harvest Road, just east of the SR-905/SR-125 Interchange in east Otay Mesa, extending east and then south approximately 2.1 miles to the new, approximately 106-acre POE at the United States (U.S.) - Mexico border. Construction of SR-11 also would require modifications to SR-905 to accommodate a connection with SR-11. The SR-11 Post Mile 0.0 would be located approximately 430 feet west of Piper Ranch Road, where SR-11 connects to SR-905. The eastern terminus of SR-11, at Post Mile 2.8, would be at the proposed northern POE boundary. The approximately 23-acre CVEF site would be located adjacent to the POE on its northern edge (refer to Figure 1-2, *Project Area Map*). The SR-11, Otay Mesa East POE and CVEF facilities are interdependent projects in that their locations and designs must be compatible, and none of the three could proceed independently of the others. These facilities ultimately would be owned, maintained and operated by different agencies, however. Caltrans would be responsible for SR-11; the POE would be owned and maintained by the U.S. General Services Administration (GSA) and operated by the U.S. Customs and Border Protection (CBP); and the CVEF would be owned and maintained by the State of California Department of General Services (DGS) and operated by the California Highway Patrol (CHP). To accommodate possible future transit service, such as Bus Rapid Transit (BRT), to the POE, the proposed project would include sufficient space within the overall POE footprint but outside the POE itself for a potential future transit center (to be designed and constructed by others). Details of location, land acquisition, design, construction, environmental review and administrative responsibility for this facility would be defined by the San Diego Association of Governments/Metropolitan Transit Service (SANDAG/MTS) at a later date.

The proposed facilities are being studied under a two-tier process. Under the first tier (referred to as Phase I), a Program Environmental Impact Report/Phase I Environmental Impact Statement (PEIR/PEIS) was prepared and approved/certified in 2008 (Caltrans 2008a); this document addressed SR-11 and the POE at a programmatic level. The PEIR/PEIS had as its purpose the identification of the preferred SR-11 and POE locations to allow for: (1) route adoption by the California Transportation Commission (CTC); (2) consideration and approval of a Presidential Permit for the location of an International Border Crossing by the U.S. Department of State (DOS); (3) facilitation of land use and circulation planning in the East Otay Mesa Specific Plan (EOMSP) area by local agencies; (4) support of international cooperation efforts to pursue the development of a new Otay Mesa East POE; and (5) future designation of right-of-way (R/W) for each facility in cooperation with local and regional jurisdictions to ensure that the R/Ws are shown conceptually on planning documents. The Phase I PEIR/PEIS was certified pursuant to the California Environmental Quality Act (CEQA) on August 6, 2008; a Record of Decision (ROD) was approved on October 6, 2008 pursuant to the National Environmental Policy Act (NEPA); and a conditional Presidential Permit for the POE was approved on November 20, 2008, and is included in Appendix A of this EIR/EIS. This environmental document constitutes a tiered (Tier II) document of the environmental program (i.e., tiered from and based on the Phase I Program PEIR/PEIS), and addresses several design and operational alternatives for the POE, SR-11 and the CVEF accordingly, pursuant to

applicable elements of the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Quality Act* (40 CFR 1500-1508), and the FHWA *Environmental Impact and Related Procedures* (23 CFR 771).

SR-11 is included in the SANDAG 2030 Revenue Constrained Regional Transportation Plan (RTP; SANDAG 2007a); the 2008 Regional Transportation Improvement Program (RTIP; SANDAG 2008), which covers Fiscal Years (FY) 2009 through 2013 (CAL ID CAL66); and the SAFETEA-LU[1] List of High Priority Projects in San Diego. These plans include SR-11 as a four-lane toll highway, with no specification as to interchanges or other design features. It is shown conceptually on the circulation elements of the EOMSP and the County General Plan as well as the Otay Mesa Community Plan (OMCP) and the City of San Diego (City) General Plan. The Otay Mesa East POE is also shown on the County's land use plan for Subarea 1 of the EOMSP, and in the RTP. The February 2011 amendment to the 2010 RTIP is expected to reflect the proposed project's modifications to SR-905 between the SR-905/SR-125/SR-11 Interchange and Britannia Boulevard, as necessary to accommodate the connection of SR-905 with SR-11.

## 1.2 PURPOSE AND NEED

### 1.2.1 Purpose of the Project

Two international POEs, San Ysidro and Otay Mesa, currently link San Diego and Tijuana, while a third POE is located east of the San Diego metropolitan area at Tecate. Together, these three POEs serve as the gateway for all pedestrian traffic and vehicular movement of people and goods between the San Diego region and Baja California, Mexico. As described above, the proposed project would constitute the second tier of planning and environmental clearance for the development of a new POE in the San Diego/Tijuana region, along with development of the associated roadway (SR-11) that would connect the new POE to the existing and planned roadway system in the area, and a new CVEF for CHP inspection of trucks entering California from Mexico. This includes the connection of SR-11 with the SR-905 facility that is currently under construction. The purpose of the Tier II project is to:

- Increase inspection processing capacities for commercial and personal vehicles and pedestrians in the San Diego/Tijuana region
- Reduce northbound vehicle and pedestrian queues and wait times to cross the border at other POEs in the region
- Accommodate projected increases in international trade and personal cross-border travel in the region in a safe and secure manner
- Contribute to reductions in congestion at existing POEs
- Accommodate commercial goods movement and cross-border travel to and from the Otay Mesa East POE

Additional objectives are to:

- Allow bicycle and transit access to the POE, including the provision of sufficient space adjacent to the POE (and accommodated within the identified POE impact footprint) for possible future development of a transit center (designed and constructed by others), thereby preserving the future opportunity to implement transit service to the POE and reducing local and cross-border personal vehicle trips.
- Where feasible and in compliance with federal and state regulations, support the 1998 Letter of Intent entitled "Binational Corridor Preservation for State Route 11 – Tijuana/ Rosarito 2000 and Site Designation for the East Otay Mesa-Mesa de Otay II Port of Entry" signed by SANDAG,

[1] The Federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), passed in August 2005, authorizes the federal surface transportation projects for highways, highway safety and transit.

City of San Diego (City), County, City of Tijuana, City of Rosarito, State of Baja California, and Caltrans. This Letter of Intent established the process by which the roadway corridors could be preserved for future construction, and the East Otay Mesa -Mesa de Otay II international border crossing could be developed, including compliance with the federal procedures within each country.

- Minimize impacts to the aquatic environment, where practicable and feasible

### 1.2.2 Need for the Project

The need for SR-11 and the CVEF is linked to the need for the new Otay Mesa East POE. There is no need for SR-11, the associated modifications to SR-905 and the SR-905/SR-125/SR-11 Interchange, or the CVEF without the POE. With implementation of the POE, however, SR-11 becomes a critical facility to connect the POE with the regional highway system via SR-905 and SR-125, and the need for a highway facility (as opposed to other types of roadway facilities) is well documented, as discussed below. Similarly, with construction of the proposed POE, access to an existing or new CVEF becomes necessary for CHP to fulfill its responsibilities to conduct safety inspections on incoming trucks.

The new POE is needed because the capacities of the existing POEs in the region are currently being exceeded, causing excessive border wait times for those engaged in commercial and personal vehicle trips. Trade and travel in this area are forecasted to continue to grow, and border delays are expected to increase correspondingly. The Otay Mesa area is covered by two Community Plans, the EOMSP in the County portion of the mesa and the OMCP in the City of San Diego portion of the mesa. Both plans designate much of the remaining undeveloped land on the mesa for industrial or residential development. Employment in the census tract (CT) surrounding the socioeconomic study area is projected to nearly triple by 2030 compared to 2000 levels (rising from 10,914 to 28,109), and, population is projected to increase by 1,942 percent (from 1,062 to 21,691) over the same time period (SANDAG 2007a).[2] As development occurs, associated demand for local transportation infrastructure, including SR-11, is also projected to increase.

The San Diego/Tijuana region is the largest urban area along the entire U.S. - Mexico border, with a combined population of over four million people. This combined population is anticipated to grow to over 5.5 million by the year 2020 (SANDAG/Caltrans 2006a). The communities of San Diego and Tijuana are connected by the existing POEs at San Ysidro and Otay Mesa, which play a major role in the exchange of goods, services and people between the U.S. and Mexico. The San Ysidro POE, open 24 hours per day and seven days per week, handles passenger vehicle, bus, rail (limited use), and pedestrian/bicycle traffic only, and is the busiest land crossing in North America, averaging approximately 13,000 northbound vehicles and 4,800 northbound pedestrians per day in 2008, according to data released by the U.S. Department of Homeland Security (DHS) and reported by the U.S. Bureau of Transportation Statistics (BTS; 2009). The Otay Mesa POE is the third busiest commercial POE between the two countries (in terms of dollar value of goods), and the busiest along the California-Mexico segment of the border. This POE handles 96 percent of all the commercial truck traffic in the region, as well as passenger vehicle, bus and pedestrian traffic (SANDAG 2007a). It is open seven days per week, with passenger and pedestrian operations taking place 24 hours per day, and commercial operations occurring 16 hours per day during the week and 8 hours per day on weekends and holidays (FHWA 2009a). In 2008 there were a reported 777,000 commercial truck crossings carrying nearly $28 billion in goods northbound at the Otay Mesa POE. The remaining commercial traffic in the San Diego County - Baja California region, over 140,000 truck trips carrying $1.2 billion in goods, passed through the POE at Tecate (SANDAG 2007a). There were an estimated 2.4 million people and 893,000 vehicles that crossed northbound at the Tecate border crossing in 2008, representing about 5 percent of the total border crossing traffic for San Diego County (U.S. Department of Transportation [DOT] 2009).

[2] Additional socioeconomic data for the Otay Mesa area are provided in Section 3.4, Community Character and Cohesion, of this Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

The need for a third POE in the San Diego/Tijuana area is well established, and is based on recent and projected increases in trade and personal travel beyond the capacities of the existing POEs. Trade between the U.S. and Mexico has increased substantially since the signing of the North American Free Trade Agreement (NAFTA) in 1994, and totaled over $332 billion by 2006 (DOT 2007a). Over 80 percent of merchandise moves across the border by truck (DOT 2007b), with a smaller portion exchanged by rail, water and air. Pedestrian and passenger car border crossings between the U.S. and Mexico have also risen dramatically in the past decade, reaching over sixty million people in 2006 in the San Diego County/Baja California border area alone (SANDAG/Caltrans 2006b). Between 1996 and 2006, the number of primary inspections (commercial and non-commercial) at the existing Otay Mesa POE increased over 80 percent, and is expected to climb an additional 50 percent by 2025 (Caltrans/GSA 2007); projections indicate the number of primary inspections at this POE will reach over 18 million by 2030 (GSA 2008). At the San Ysidro POE, it is anticipated that the total number of primary inspections will increase by approximately 28 percent between 2006 and 2025, with a similar percentage increase at the Tecate POE (Caltrans/GSA 2007). This increase in trade and travel, in combination with recent increases in U.S. security requirements such as the Western Hemisphere Travel Initiative (WHTI),[3] the United States Visitor and Immigrant Status Indicator Technology project (US-VISIT),[4] and the Secure Border Initiative (SBI),[5] has resulted in infrastructure-related challenges. Current transportation infrastructure was not designed to handle the large traffic volumes stimulated by NAFTA and other economic growth.

The growth in local population and international trade have resulted in corresponding increases in cross-border traffic along the southern U.S. border, placing greater strain on the POEs and regional transportation infrastructure. The existing San Ysidro and Otay Mesa POEs have become a bottleneck in the system of interchange between the two countries, increasingly restricting the movement of people and goods at peak times. Studies undertaken in 2006 concluded that expected wait times for personal trips averaged 45 minutes at the Otay Mesa POE and 75 minutes at the San Ysidro POE during peak periods, while approximately 10 percent of people expected to wait as long as one hour at the Otay Mesa POE and two hours at the San Ysidro POE. The average expected processing and wait time for commercial freight crossings at the Otay Mesa POE was reported as typically 1.5 to 2 hours (without U.S. secondary inspection), with 10 percent of commercial border crossers expecting to wait as long as 4 hours (SANDAG/Caltrans 2006a).[6] A border crossing traffic study completed for GSA's San Ysidro POE Improvements Project in April 2009 projected that, without increased capacity or other improvements, wait times for vehicles at the San Ysidro POE could average 10 hours by 2030 (KOA Corporation 2009).

According to a January 2006 SANDAG/Caltrans study *Economic Impacts of Wait Times at the San Diego – Baja California Border*, border delays discourage cross-border personal trips, and result in increased transportation costs and interruptions in the manufacture and delivery of goods (SANDAG/Caltrans 2006a). In an economy increasingly based on "just in time" delivery of inputs and products, unpredictable border wait times for trucks act as a barrier to trade, inhibiting cross-border economic investment opportunities. The study concludes that:

[3] The WHTI plan, as directed by the Intelligence Reform and Terrorism Prevention Act of 2004, is designed to enhance U.S. border security while facilitating legitimate travel and trade. Under WHTI, travelers entering the U.S. must present specified documentation that proves both identity and citizenship.

[4] US-VISIT is a project that uses biometric data (digital finger scans and photographs) to verify travelers' identity and to check against a database of known criminals and suspected terrorists.

[5] The SBI is a multi-year plan to add more border patrol agents; expand illegal immigrant detention and removal capabilities; and upgrade border control technology, including manned/unmanned aerial assets, and detection technology; increase investment in border infrastructure improvements; and increase interior enforcement of U.S. immigration laws.

[6] Based on limited actual wait time data reported by CBP and a survey conducted for the SANDAG/Caltrans 2006 State Route 11 Toll Road and East Otay Mesa Port of Entry Financial Feasibility Study (SANDAG/Caltrans 2006a) and validated by the study's Expert Panel. No recent studies of actual wait times are available.

> "Inadequate infrastructure capacity, which is failing to keep up with the increase in trade and security requirements at the principal border crossings between San Diego County and Baja California, currently creates traffic congestion and delays that cost the U.S. and Mexican economies an estimated US$6 billion in gross output in 2005. An estimated 51,325 jobs are sacrificed because of the reduction in output."

The study also indicated that border delays will increase and the economic losses incurred by the regional and national economies will more than double in the next 10 years, unless substantial improvements in border crossing and transportation infrastructure and management take place.

In 2000, a study of the *Feasibility of Opening an International Border Crossing at Jacumba Jacume* was prepared by SANDAG and Caltrans District 11. Jacumba is located about 70 miles east of downtown San Diego on Old Highway 80, 2 miles south of Interstate (I-) 8 and east of SR-94. The study found that a border crossing at Jacumba would improve border access for some trucks that use I-8 to transport goods between Baja California and locations east of San Diego. Only about four percent of trucks that cross the border at Tecate and Otay Mesa, however, travel on I-8. Most of the truck traffic to and from the border moves on I-5, I-805, and I-15, which are more accessible to Otay Mesa and Tecate than Jacumba. The study also found that the volume of truck traffic moving westward between Tecate and San Diego would be unaffected by a new commercial crossing at Jacumba, as this route would be much longer and more time consuming. Accordingly, a new crossing at Jacumba, currently in the feasibility study phase, would not affect the need for the proposed Otay Mesa East POE.

Numerous improvements to the existing San Ysidro, Otay Mesa and Tecate POEs have been studied, and in many cases have been implemented or are planned for implementation to reduce border delays. The existing 43-acre Otay Mesa POE was last upgraded and expanded in 1994. The deficiencies of the existing Otay Mesa POE are detailed in the GSA study entitled *Expanded Feasibility Study: Otay Mesa and Otay Mesa East Ports of Entry, San Diego, CA. 100% Report* (GSA 2008). Deficiencies include crossing traffic patterns within the POE, limited lane capacity, short queuing opportunities, the lack of primary inspection lanes and a screened secondary inspection area, and increases in air pollution generated by traffic queues. The existing Otay Mesa POE is surrounded on the north and west by commercial development, including warehouses and brokerage offices, and on the south by the Mexican POE facilities and adjacent dense residential, commercial and industrial development. An adjoining, 10-acre parcel on the east was purchased in September 2009 to allow for expansion on the U.S. side of the existing Otay Mesa POE (Caltrans/GSA 2007), but constraints on the Mexican side of the border at this location remain.

A 2004 Caltrans study (Caltrans 2004a) identified a number of recommendations for improvements in the flow of vehicles and the operational efficiency of the existing Otay Mesa and San Ysidro POEs. For the northbound flow at Otay Mesa, the report suggested implementing a number of potential operational improvements and increasing the number of lanes leaving the Mexican export facilities. For the southbound flow at Otay Mesa, recommendations focused on improving access leading to the U.S. export facilities, re-routing empty commercial trucks within the Mexican import facilities, and improving unsignalized intersections. The 2008 GSA feasibility study presents a detailed modernization plan for the existing Otay Mesa POE that includes these and other recommended improvements. The feasibility study concludes, however, that in addition to this proposed renovation, the proposed Otay Mesa East POE is still needed to satisfy current and anticipated regional demand. Based on the results of the 2008 GSA feasibility study regarding anticipated POE functional needs for 2030, and the expected capacity after renovation, maximum renovation of the existing Otay Mesa facility would not be sufficient to achieve the projected POE needs for 2030.

At the San Ysidro POE, the 2004 Caltrans study (Caltrans 2004a) recommended expansion of the SENTRI lanes[7] (completed in June 2007), signalization of an intersection, enforcement of no parking zones, restriping lanes, rerouting traffic, expansion of bicycle facilities (completed in Spring 2007), and other improvements. An additional stairway was recently constructed adjacent to the Camino de la Plaza pedestrian overcrossing to facilitate southbound pedestrian access to an existing bus stop on the west side of I-5. The San Ysidro POE is also in the master planning stages of a project that would include demolition and new construction of most of the POE. An EIS was prepared for the project (GSA 2009a) and the ROD was executed on September 9, 2009 (GSA 2009b). The new facility, as defined under the San Ysidro POE project's preferred alternative, is planned to include 210,000 square feet (sf) of building space, primary and secondary inspection areas, 30 northbound vehicle primary inspection lanes with 60 inspection booths, and one bus lane (GSA 2009a). In addition, a new southbound alignment of I-5 would be constructed to connect with Mexico's El Chaparral facility, and two new southbound pedestrian crossings would be built. Even with these improvements, northbound delays would be expected to continue to exceed 60 minutes without implementation of the proposed SR-11/Otay Mesa East POE project. Finally, the Tecate POE has recently been expanded on the U.S. side, but operational and access constraints have limited the effective capacity of this POE.

Overall, while these short-term solutions can enhance the flow of goods and people, growth is outstripping capacity at the existing POEs, particularly on the Mexican side of the border where the two existing POEs are surrounded by dense development. Even with maximum renovation at the regional POEs, congestion levels would continue to increase. Regional transportation modeling used for the GSA feasibility study indicates that, with planned improvements to the existing Otay Mesa POE, approximately two percent of the passenger vehicle traffic could shift from the San Ysidro POE to the improved Otay Mesa POE, offering little to no improvement in border delays. In addition, full expansion and/or renovation of the existing Otay Mesa POE on the U.S. side of the border would not relieve congestion unless there is similar expansion of the corresponding Mexican POE, which is currently at maximum expansion capacity with no further available space to grow.

Increasingly, there is also a need to accommodate cross-border transit users and bicyclists. Currently, transit service to POEs in the San Diego region is provided by MTS and private intercity and regional bus services. MTS Bus routes 929 and 932 serve the San Ysidro POE, while the MTS Blue Line trolley provides transit services from downtown San Diego to the San Ysidro POE, with bus routes 905 and 905A providing transit connections between the trolley and the Otay Mesa POE. In addition to public transit, private transit operators, including taxis, vans and shuttle buses, operate in the area of the Otay Mesa and San Ysidro POEs. Bicycle facilities within the vicinity of the San Ysidro POE include Class II bike lanes (i.e., striped and stenciled lane for one-way bicycle travel on the roadway), bicycle racks, and a bicycle parking lot. A bicycle route along SR-905, as well as bike lanes along the north/south portion of SR-905 and along Siempre Viva Road between La Media Road and Enrico Fermi Drive, offer bicycle access to/from the existing Otay Mesa POE. Regional and local land use and transportation plans encourage the development of transit and bicycle facilities as alternatives to driving in the region. Any new U.S. - Mexico border crossing would need to accommodate bicycle and transit access, to aid in reducing local and cross-border personal vehicle trips.

Transportation and land use planning agencies on both sides of the border have identified the long-term need for a third border crossing and associated transportation facilities in the San Diego/Tijuana area, in addition to completing planned improvements to the existing POEs. Local, regional and bi-national land use studies identified the eastern side of Otay Mesa as the preferred general location of the new POE, and

[7] The SENTRI (Secure Electronic Network for Travelers Rapid Inspection) project consists of dedicated commuter lanes where prescreened applicants and vehicles are allowed to cross the border northbound into the US, usually more quickly and efficiently than in the open-access lanes.

a Phase I planning/environmental process has been completed to select the preferred location for the project within the U.S., corresponding to the POE site that has been identified on the Mexico side of the border. Binational support for the new POE is evidenced by:

- The signing of an agreement (referred to as a "Letter of Intent"), entitled "Binational Corridor Preservation for State Route 11 - Tijuana/Rosarito 2000 and Site Designation for the East Otay Mesa - Mesa de Otay II Port of Entry" by SANDAG, City of San Diego, County of San Diego, City of Tijuana, City of Rosarito, State of Baja California, and Caltrans in 1998.
- Completion of a roadway plan for a new Otay II POE entitled, "Estado de Integración Vial Para El Puerto Fronterizo Otay Este II, En La Ciudad de Tijuana, B.C.," 2002, from the Municipality of Tijuana and the Secretariat of Social Development of the Mexican federal government.
- Identification by the Mexican government Secretariat of Communication and Transportation (SCT) of the need for additional capacity for commercial traffic in the Tijuana region in the document, "Análisis de las Necesidades de Ampliación de la Capacidad de la Infraestructura de Transporte en los Puertos Fronterizos de Carga de Tijuana, B.C.," October 2002.
- Completion of the Partial Program of Improvement of Otay Mesa East ("Programa Parcial de Mejoramiento de la Mesa de Otay Este") by the Instituto Municipal de Planeación (IMPlan), August 2005.
- The diplomatic note sent on May 17, 2006 from the Mexican federal government to the U.S. Department of State indicating the Mexican government's interest in conducting the necessary feasibility studies on both sides of the border.
- Reservation of the land needed for the Otay II POE by the Municipality of Tijuana through the State of Baja California. The act was published in the Periódico Oficial (similar to the U.S. Federal Register) on May 19, 2006 (#21 – Section 1). Although this land reservation will expire on May 19, 2011, it can be extended based upon project status at that time.
- The Conceptual Master Plan, Cost/Benefit Studies and Financial Feasibility (Feasibility Study) for a new crossing at Otay Mesa East ("Elaboración del Plan Maestro Conceptual, Estudios de Costo Beneficio y Factibilidad Financiera para el Nuevo Cruce Internacional de Mesa de Otay II, en el Estado de Baja California"), conducted by the SCT.
- Approval of the Otay Mesa/Mesa de Otay Binational Corridor Strategic Plan by the SANDAG Board of Directors on September 28, 2007 and the Tijuana City Council on October 5, 2007.
- Approval of the ROD for Phase I of the Otay Mesa East POE and SR-11 Program by the FHWA in September, 2008.
- CEQA Certification of the PEIR/PEIS for Phase I of the Otay Mesa East POE and SR-11 Program on October 6, 2008.
- Approval of a conditional Presidential Permit to construct, operate, and maintain a vehicular and pedestrian border crossing at the Otay Mesa East POE location (included as Appendix A of this EIR/EIS) by DOS on November 20, 2008.

Mexico is undertaking a corresponding POE project on its side of the border, and Mexican agencies are addressing potential environmental impacts of concern to Mexico. The responsible agencies from Mexico and the U.S. also participate in the on-going Border Liaison Mechanism, which meets regularly to discuss transboundary issues and exchange information associated with the two projects. The Border Liaison Mechanism participants include FHWA, Mexico's SCT and IMPlan, SANDAG, Caltrans, the Mexican Consulate in San Diego, the American Consulate in Tijuana, GSA, and CBP.

Given the need for the new Otay Mesa East POE, SR-11 would be required to provide access to and from the new POE, through a currently undeveloped area. Planned County Circulation Element Roads in the

area would not be adequate to carry the personal and commercial vehicle traffic expected to flow through the new POE. Proposed SR-11 would provide a direct connection from the existing and planned highway system in the area to the new Otay Mesa East POE (refer to Figure 1-1). On the Mexico side, the new POE (called Otay II) would be directly connected to the Tijuana-Tecate Toll Road, thus providing binational regional mobility through the new POE (IMPlan 2005; refer to Figure 1-3, *Conceptual Otay Mesa East Cross-Border Circulation Plan*). The Project Study Report (PSR) for SR-11 (Caltrans 2000) determined that the construction of a conventional highway or expressway would provide substantially less mobility for interregional cross-border traffic than would a freeway, and might not adequately handle the anticipated high volume of truck traffic, particularly at intersections. The option of using local roadways to access the POE was also considered. Local roadways, however, are not designed to support the large volume of trucks that would be anticipated to use the roads to access the POE. Furthermore, use of the local roads to connect trucks to the regional highway system would place the burden to maintain the roadway facilities serving truck traffic associated with international goods movement on local jurisdictions. In addition, local traffic circulation and access to future local businesses fronting these roadways could potentially be disrupted, as currently occurs due to queuing associated with congestion at the existing Otay Mesa POE. The project traffic study shows that a four-lane toll highway would be adequate to accommodate projected POE-related traffic at least through 2035.

The connection of the Otay Mesa East POE to the regional highway system via SR-11 would require the connection of SR-11 to SR-905 (currently under construction) and SR-125. SR-11 would replace a local access ramp to Enrico Fermi Drive that was approved as part of the SR-905 project. This approval included a westbound to northbound connection to SR-125 and one- to two-lane east- and westbound connections with SR-905. The traffic studies for SR-11 and engineering analysis show that the connections with SR-905 would require two lanes for the entire length, and that these lanes flowing into SR-905 cannot be fully tapered out until just west of Britannia Boulevard, due to the need to also accommodate merging traffic and weaving associated with the ramps to and from SR-125 and La Media Road. The result is that SR-905 would need to accommodate four lanes of travel in the westbound direction between SR-125 and Britannia Boulevard. In addition, on the eastbound side of SR-905, a new auxiliary lane would need to be extended between La Media Road and the SR-11 connector to accommodate anticipated traffic.

The new CVEF would allow CHP to efficiently inspect trucks entering the U.S. through the new POE to assure adequate safety levels when travelling on U.S. roadways. A similar, existing CVEF located on the eastern side of Enrico Fermi Drive between Siempre Viva Road and Via de la Amistad currently serves the existing Otay Mesa POE as a CHP inspection point for northbound commercial vehicles entering the U.S. through that POE, but this existing CVEF is currently operating near capacity and is expected to serve a planned modernization of the Otay Mesa POE. In addition, during the Tier II scoping process, it was determined that construction and operation of a new CVEF adjacent to the proposed Otay Mesa East POE would have considerable security, operational and environmental advantages over options providing access from the new POE to the existing CVEF.

In conclusion, the three interdependent elements to be constructed under the proposed project (i.e., the new POE, SR-11 and the new CVEF) are needed to alleviate congestion and facilitate improved trade and personal travel across the U.S. - Mexico border in the San Diego/Tijuana area.

### 1.2.3 Independent Utility and Logical Termini

FHWA regulations (23 CFR 771.111 [f]) require that the action evaluated:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope

2. Have independent utility or independent significance (be usable and require a reasonable expenditure even if no additional transportation improvements in the area are made)

3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements

As discussed above, the overarching need for the project is driven by the need for the new Otay Mesa East POE. SR-11 and its associated modifications to SR-905 would connect the new POE with the regional highway system, and the CVEF would allow CHP to fulfill its responsibilities to conduct safety inspections on incoming trucks passing through the new POE. The boundaries of the proposed project extend southeasterly from just west of Britannia Boulevard on the west, through the SR-905/SR-125 Interchange to the site of the proposed POE at the U.S. - Mexico border and the proposed CVEF site located adjacent to the POE on its northern edge. These boundaries are logical because they connect the essential elements of the proposed project and encompass the area potentially affected by project construction and operation. Together, the three interdependent elements create a project that has independent use and that represents a reasonable expenditure of public funds to benefit the local area, region, and nation, even without other planned improvements to transportation facilities and existing POEs. Also, the consideration of alternatives for other projects would not be restricted by the proposed project boundaries. As evaluated in detail in Section 3.1, Land Use, the proposed project would not conflict with other reasonably foreseeable transportation and development projects. The EOMSP identifies a conceptual SR-11 corridor and POE site approximating the proposed project, as well as a roadway network connecting with these facilities and serving local land uses. The EOMSP recognizes that modifications to this network may be necessary based on the approved final design of the proposed project. The project has been identified for many years in the County General Plan, and the City's General Plan and OMCP. In addition, property owners/developers have been tracking the proposed project and have been planning/designing their development projects to accommodate SR-11 and the proposed POE in the location that was selected in the Phase I ROD for the proposed project. Therefore, the proposed project satisfies the FHWA requirements for independent utility and logical termini.

### 1.2.4 Status of the Related SR-905 Project

The SR-905 ROD (FHWA-EIS-CA-01-03-F/July 23, 2004) approved the construction of SR-905 from I-805 to the Otay Mesa POE. This project is being constructed in the following stages:

Stage 1A: Includes construction of a new freeway from 0.6 kilometers (KM) east of Cactus Road to 0.3 KM west of the Mexico Border. Construction of this stage has started and is scheduled to be completed between December 2010 and February 2011.

Stage 1B: Includes construction of a new freeway from 1.2 KM east of the I-805/SR-905 separation to 0.8 KM east of the Brittania Boulevard overcrossing. Construction of this stage has also started, and is scheduled for completion in 2013.

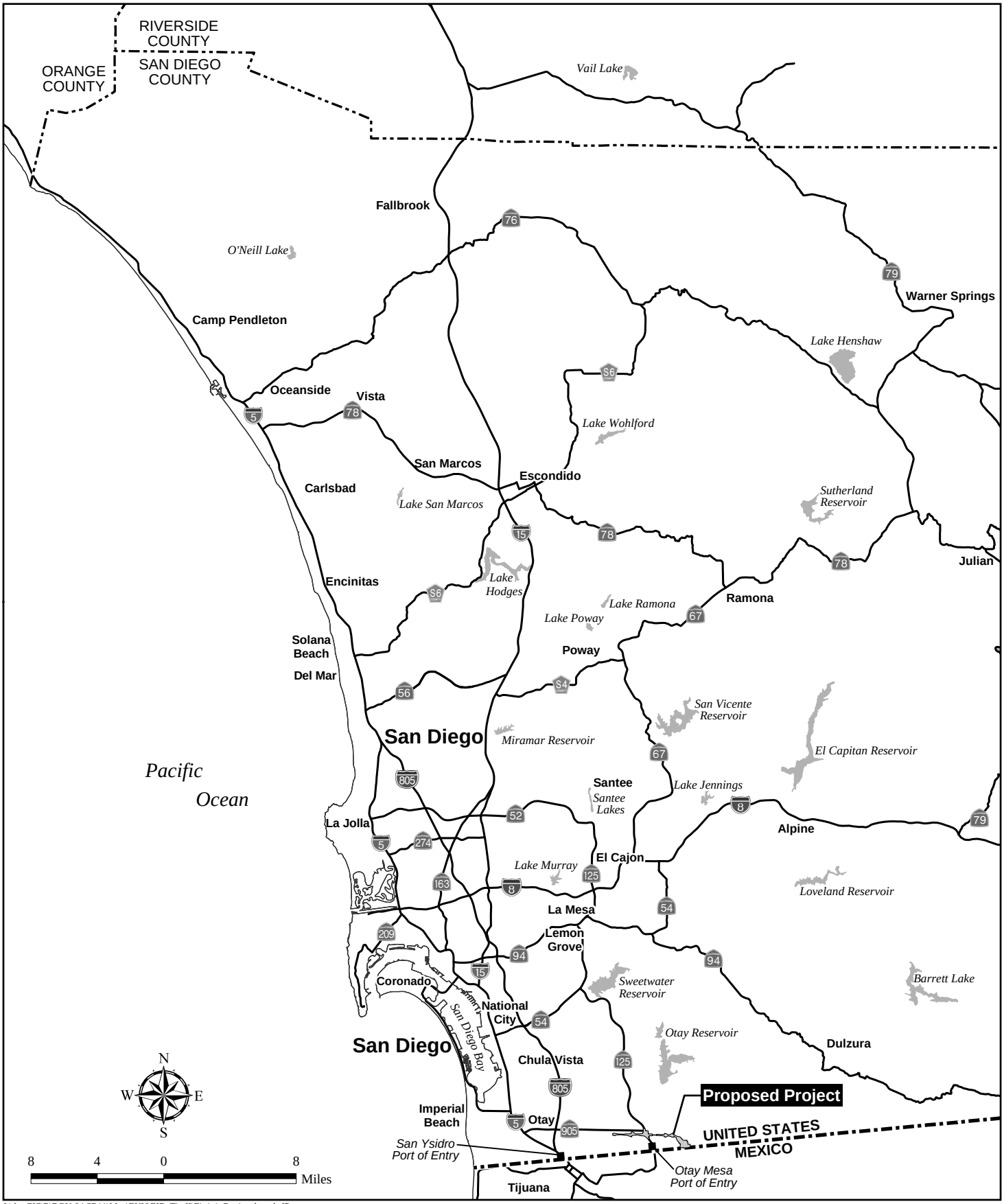
Stage 2: Construction of this stage is on the SR-905 from 0.1 KM to 1.5 KM east of the I-805/SR-905 separation, and on I-805 from 0.2 KM north of the I-805/SR-905 separation to 0.5 KM south of the Palm Avenue overcrossing. Construction of this stage is scheduled to begin in Spring 2011.

Stage 3: This stage will construct a new freeway ramp from 0.5 KM east of La Media Road to an intersection at Enrico Fermi Drive. The construction schedule of this stage is undetermined.

Stage 4: During this final stage, the Heritage Road Interchange ramps would be constructed. Should the local streets not receive all the necessary future approvals, the interchange may not be needed or constructed. Stage 4 is anticipated to be under construction no sooner than the Fall of 2016.

SR-905 Stage 3 overlaps with the proposed SR-11/Otay Mesa East POE project area. If construction of this stage moves forward prior to the identification of the preferred alternative for the SR-11/Otay Mesa East POE project, then the intersection at Enrico Fermi Drive would be removed under the No Interchange Alternative and the One Interchange Alternative when SR-11 is built through this area.

The proposed SR-11 improvements would modify the approved plans for SR-905 between Britannia Boulevard and Enrico Fermi Drive. Depending on the timing of SR-11 implementation relative to SR-905 construction, the proposed modifications to SR-905 could be implemented simultaneously with SR-905 construction or after SR-905 construction.

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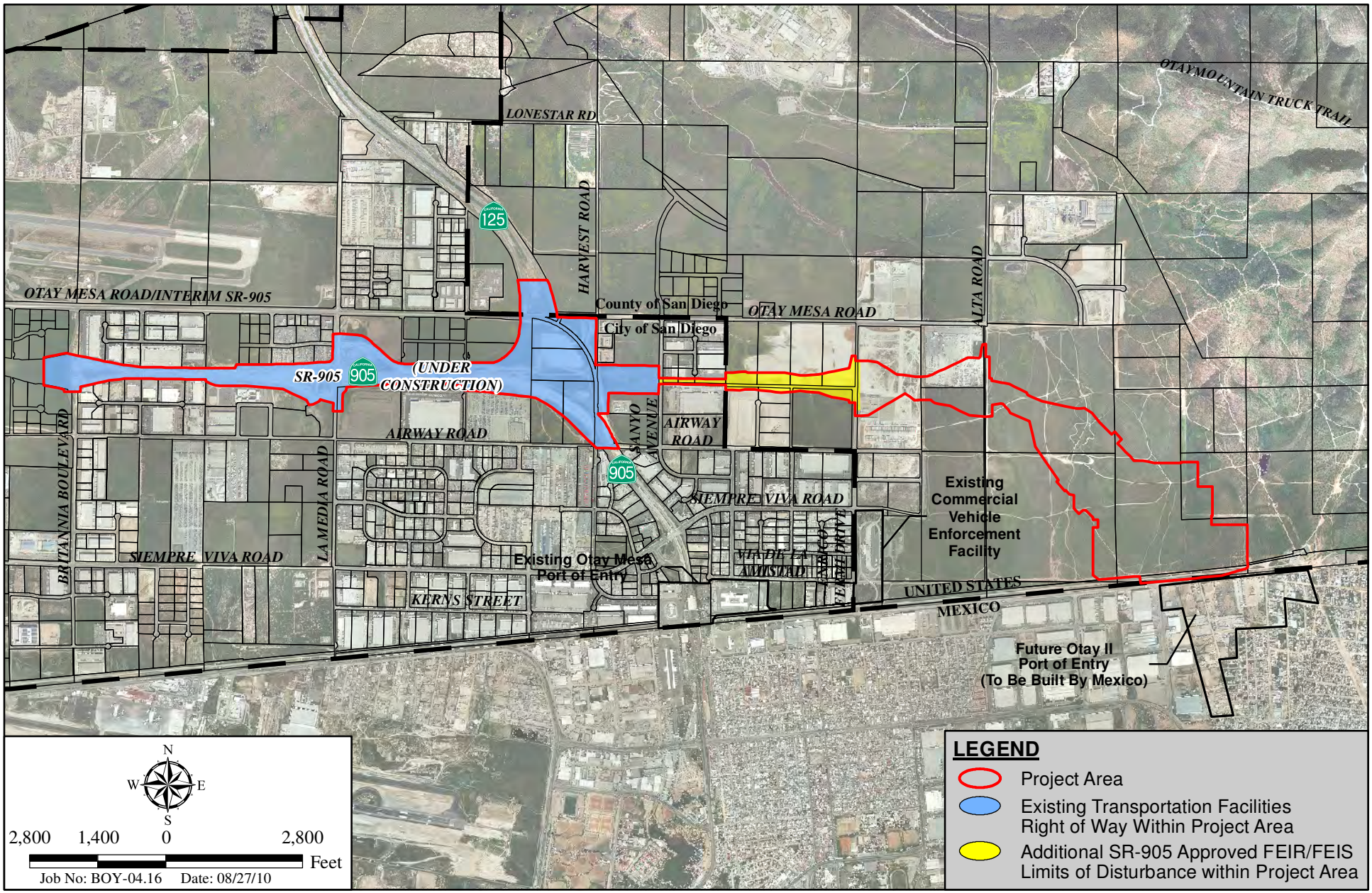
# Regional Location Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 1-1

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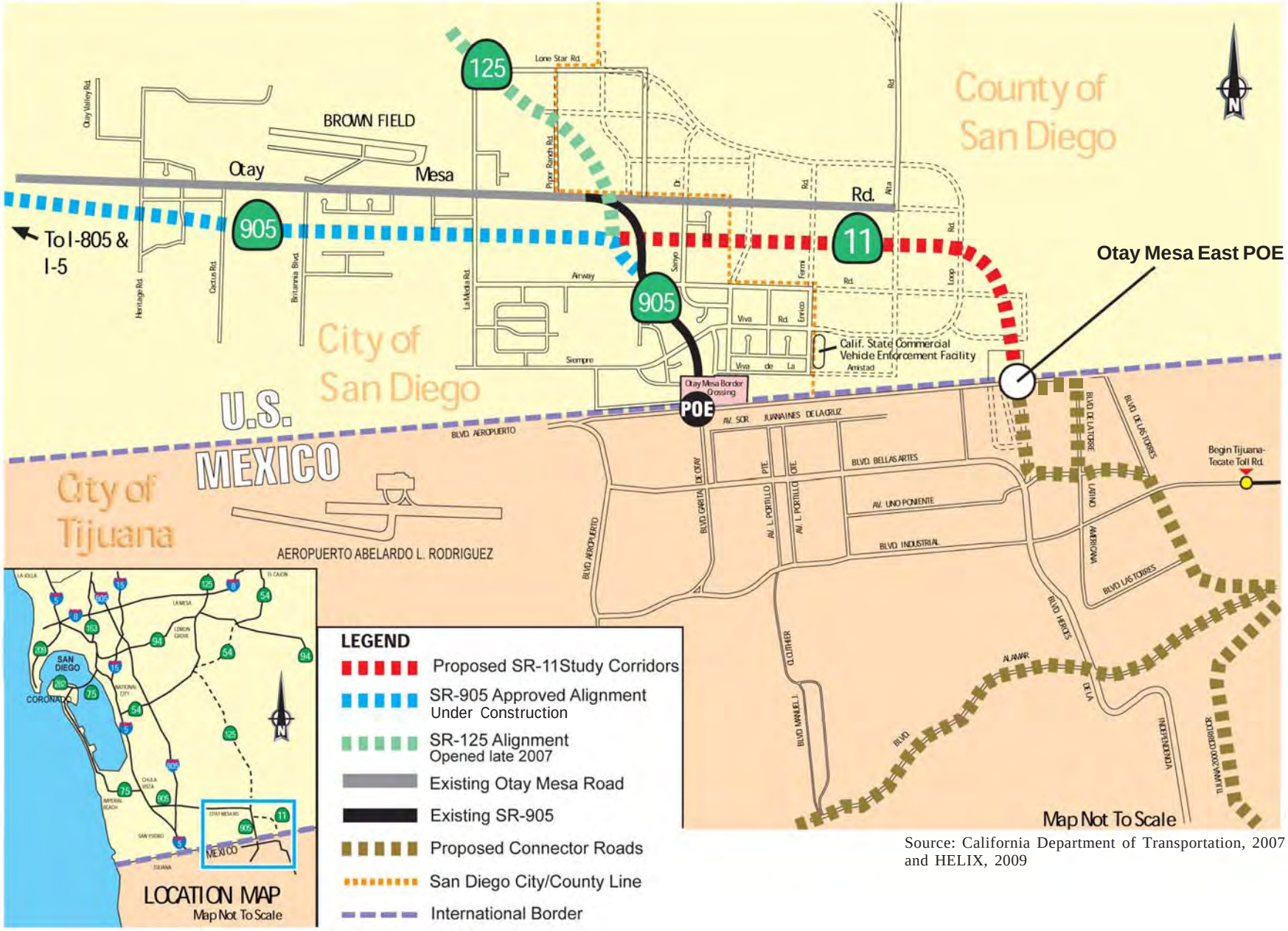
# Project Area Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 1-2




Source: California Department of Transportation, 2007 and HELIX, 2009

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# Conceptual Otay Mesa East Cross-Border Circulation Plan

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 1-3


# Chapter 2
# Project Alternatives

# CHAPTER 2.0 – PROJECT ALTERNATIVES

## 2.1 PROJECT DESCRIPTION

### 2.1.1 Introduction/Background

This section describes the Tier II alternatives for the proposed SR-11 toll highway and Otay Mesa East POE project (proposed project). The purpose of the proposed project is to increase inspection processing capacities, reduce border crossing wait times, reduce northbound vehicle and pedestrian queues and wait times at other POEs in the region, accommodate projected increases in cross-border travel, help reduce congestion at existing POEs, and accommodate commercial goods movement and cross-border travel to and from the proposed Otay Mesa East POE. The Tier II alternatives and design variations were developed to meet the identified need through accomplishing the defined purpose while avoiding or minimizing environmental impacts.

As noted in Chapter 1.0, Proposed Project, a previous, program-level (Phase I) PEIR/PEIS was certified on August 6, 2008, and the Phase I ROD was approved on October 6, 2008. The Phase I PEIR/PEIS focused on selecting generalized locations for proposed SR-11 and the POE site, analyzing the Western and Central alternatives depicted in Figure 2-1, *Phase I Program Alternatives*, as well as the No Build Alternative. An Eastern Alternative was previously studied and eliminated as a result of anticipated impacts to sensitive biological and cultural resources (see Section 2.3 below). Based on data provided in the PEIR/PEIS and information received during public review, the Phase I ROD selected the Western Alternative as the preferred SR-11 corridor and POE location over the Central Alternative for the following reasons:

- It would fulfill the Phase I program purpose and need
- It would exhibit a lower potential for Tier II impacts to listed/sensitive biological resources (i.e., it was the biologically preferred alternative)
- It would have a lower potential for land use impacts
- It was preferred by the majority of the cooperating and participating agencies, including the resource agencies
- It would be the more cost-effective solution to the program purpose and need

Based on the Phase I PEIR/PEIS and ROD, the Tier II analysis in this environmental document identifies and evaluates design and operational alternatives for the proposed new SR-11 toll highway, the POE, a related CVEF located adjacent to the POE, and SR-11 connections to SR-905 and SR-125. Evaluation of proposed SR-11 includes three build alternatives and a number of related design and operational variations, while the POE/CVEF analysis is based on preliminary facility design/layout, including space for a potential future transit center adjacent to the POE and within the overall POE footprint. The Tier II alternatives are generally located within the boundaries of the Phase I Western Alternative, for which a conditional Presidential Permit was granted by the U.S. State Department in November 2008. The configurations of both the SR-11 and POE/CVEF sites have been refined during the Tier II scoping process in response to various engineering, planning and environmental considerations. For instance, the shape of the POE was modified to accommodate grading requirements to achieve a usable 100-acre POE pad, and to address a request by the Mexican government to create a greater frontage or overlap with the

proposed Mexican Otay II POE site, while still minimizing impacts to coastal sage scrub, wetlands/Waters of the U.S. (WUS), and sensitive plants.

SR-905 is currently under construction between SR-125 and Britannia Boulevard and would connect to proposed SR-11. SR-905 was originally approved as a six-lane highway (three lanes in each direction), with a median wide enough to accommodate four additional lanes, two of which could function as high occupancy vehicle (HOV) lanes should future demand justify their construction. Operation of the proposed project would require connectivity with SR-905. Therefore, the Tier II alternatives include connectors linking SR-11 to SR-905, and associated modifications to SR-905.

The Tier II project alternatives and variations are described below**.**

### 2.1.2 Project Location and Local Land Use/Planning Framework

Proposed SR-11 would extend generally east and south for approximately 2.1 miles from the approved SR-905/SR-125 Interchange (near Harvest Road), terminating at the proposed Otay Mesa East POE/CVEF sites (refer to Figures 1-1 and 1-2, in Chapter 1.0). Extending west of Harvest Road, the project would include approximately 2.1 miles of connectors linking SR-11 to SR-905, and associated modifications to SR-905. The majority of proposed SR-11 would be located within Subareas 1 and 2 of the County of San Diego EOMSP, which is part of the County's Otay Subregional Plan. The westernmost portion of proposed SR-11, the proposed connectors between SR-11 and SR-905, and the associated modifications to SR-905 extending through the Britannia Boulevard Interchange, would be within the OMCP area of the City of San Diego. The entirety of SR-11 would be located outside the boundary of the Coastal Zone. Existing development within the SR-11 limits of disturbance includes portions of an industrial park in the area just east of Sanyo Avenue, an adjacent developed industrial property, a vehicle auction yard near the southwestern corner of the Otay Mesa Road/Alta Road intersection, and an adjoining parcel to the west of this, which has been graded and is currently being used for truck parking. The remaining portions of the proposed SR-11 limits of disturbance encompass areas of native and non-native vegetation, previously graded (but undeveloped) sites, and a number of unpaved roads and trails (refer to Figure 1-2). Modifications to SR-905 to accommodate its connections with SR-11 would occur between the SR-905/SR-125/SR-11 Interchange and the SR-905/Britannia Boulevard Interchange, and would be entirely within the existing R/W for SR-905. Industrial, undeveloped and educational (Southwestern College satellite campus) land abuts this segment of SR-905.

The combined POE/CVEF footprint would extend from the eastern/southern terminus of proposed SR-11 to the U.S. - Mexico international border, including improvements within a 150-foot wide U.S. Border Patrol enforcement area that extends along the border on the U.S. side. The project would be entirely within the EOMSP area and outside the boundary of the Coastal Zone. The proposed POE and CVEF sites are currently undeveloped, and encompass primarily non-native vegetation, with several unpaved roads and trails.

## 2.2 ALTERNATIVES

The alternatives addressed in this EIR/EIS were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. Under evaluation in this document are three build alternatives (referred to as the Two Interchange, One Interchange, and No Interchange alternatives), with several design/operational variations, as well as the No Build Alternative. The build alternatives share the same design for the proposed improvements to SR-905 to accommodate the connection with SR-11, as well as the same conceptual designs for the POE and CVEF. The differences associated with the project build alternatives are reflected within the designs of SR-11, particularly with respect to the locations and configurations of interchanges, underpasses, and overpasses.

Figure 2-2, *Comparative Overview of the Project Build Alternatives*, compares the major features of the build alternatives. Briefly, the alternatives may be differentiated as follows:

- The Two Interchange Alternative includes two interchanges that would be constructed along SR-11 at Enrico Fermi Drive and Siempre Viva Road, as well as an overcrossing at Alta Road and an undercrossing at Sanyo Avenue. The interchange at Enrico Fermi Drive would be a full interchange. Two design options are considered for the interchange at Siempre Viva Road; a half interchange ("baseline" design) and a full interchange (variation).
- The One Interchange Alternative would incorporate a single full interchange at Alta Road, approximately 1.4 miles east of the SR-905/SR-125/SR-11 Interchange. This alternative would also include overcrossings at Enrico Fermi Drive and Siempre Viva Road, and an undercrossing at Sanyo Avenue.
- The No Interchange Alternative would have no interchanges along the proposed alignment of SR-11. Overcrossings would be built at Enrico Fermi Drive, Alta Road and Siempre Viva Road, and an undercrossing would be built at Sanyo Avenue.

Several potential designs are under consideration for the SR-905/SR-11/SR125 Interchange. The original "baseline" design includes the eastbound SR-905 to eastbound SR-11 connector and the westbound SR-11 to westbound SR-905 connector (as well as an exit ramp to La Media Road from the westbound connector). Variations under consideration in this EIR/EIS for this interchange include the SR-125 Connector Variation (which would provide a flyover to connect southbound SR-125 to eastbound SR-11) and the SR-905/SR-125/SR-11 Full Interchange Variation (which, in addition to the flyover connector, would also add connectors from westbound SR-905 to eastbound SR-11 and from westbound SR-11 to eastbound SR-905). Finally, a variation is considered that would provide a 46-foot median between the existing buildings east of Sanyo Avenue, instead of the proposed "baseline" 22-foot median in this segment of the project.

SR-11 would be constructed and operated as a toll facility under all of the build alternatives, with SANDAG as the toll authority under state legislation (SB 1486). The proposed toll system is currently anticipated to include toll collection in both directions and the use of "smart technology" such as FasTrak, although additional toll-related options are still under evaluation. A Traffic and Revenue Study currently underway will determine toll pricing, but it is anticipated that tolls would vary by vehicle type, and variable congestion pricing would be implemented for both commercial and passenger vehicles. This system is intended to provide a financial incentive to encourage accessing the POE during non-peak hours, thereby reducing peak hour congestion. Preliminary cost projections provided in the SANDAG/Caltrans *State Route 11 Toll Road and East Otay Mesa Port of Entry Financial Feasibility Study* suggest that anticipated non-peak to peak hour tolls could range from approximately $32 to $47.30 for commercial vehicles, and $1.60 to $7 for passenger vehicles (SANDAG/Caltrans 2006a). Information on transit usage of the facility and related tolling strategies is not currently available, but the proposed project would not preclude different tolling strategies, transit usage, or compatibility with a potential future transit center. Competitive pricing for transit vehicles may be employed to encourage transit ridership and reduce passenger vehicle traffic, at the discretion of SANDAG, which would be the responsible tolling agency. Pedestrians and bicycles crossing the border but not accessing SR-11 would not be subject to a toll. A variation of the build alternatives in which vehicles are not subject to a toll (the No Toll Variation) is also analyzed in this EIR/EIS.

High Occupancy Vehicle (HOV) lanes are not included in the project design at this time, because of POE security and inspection requirements, but other Transportation Systems Management/Transportation Demand Management (TSM/TDM) measures are incorporated into all of the build alternatives and variations. The project design includes a site for a future transit center (to be constructed by others), as well as a pedestrian pick-up/drop-off location, and will accommodate pedestrian and bicycle crossings. Pedestrians and bicyclists will not be subject to a toll, which provides an incentive for these modes. TSM/TDM measures currently being evaluated for the project include: (1) possible use of ramp metering

at SR-11 interchange(s); (2) implementation of intelligent transportation systems (ITS) strategies such as closed-circuit television (CCTV) cameras, traffic loop monitoring stations (TMS) and transportation management center (TMC) connections; (3) provision of multi-modal facilities and services for POE uses such as bicycle, pedestrian and bus facilities (e.g., dedicated lanes and staging areas), connectivity potential for BRT service, and inclusion of space for a potential future transit center site (to be constructed by others); (4) implementation of variable congestion pricing; (5) provision of dedicated commercial and passenger traffic lanes; and (6) use of extended POE operation hours.

Implementation of SR-11, the POE and CVEF under all of the project build alternatives would require partial acquisition of 19 parcels, 18 of which are privately owned; the remaining parcel is owned by the Otay Water District (OWD). In the area west of Enrico Fermi Drive, SR-11 and its connectors to SR-905 would lie primarily within the area previously approved as part of the SR-905 project. Under the SR-11 project, however, proposed property acquisitions in the Sanyo Avenue area would be greater than those approved for the SR-905 local access connection to Enrico Fermi Drive. West of Sanyo Avenue, the proposed R/W is currently under Caltrans ownership. More detailed information on property requirements is provided in Section 3.1, *Existing and Future Land Use* and Section 3.5, *Relocations and Real Property Aquisitions*.

The remainder of Section 2.2 describes and differentiates between the project alternatives and design variations, defines the No Build Alternative, and briefly describes the decision-making process required to select an alternative and approve the project. This section is organized as follows:

State Route 11
- Common SR-11 Major Features Under All Build Alternatives
- Two Interchange Alternative – Additional Major Features
  - Siempre Viva Road Full Interchange Variation on the Two Interchange Alternative
- One Interchange Alternative – Additional Major Features
- No Interchange Alternative – Additional Major Features
- Variations on Any of the Build Alternatives
  - No Toll Variation
  - 46-foot Median Variation
  - SR-905/SR-125/SR-11 Interchange Variations
    - SR-125 Connector Variation
    - SR-905/SR-125/SR-11 Full Interchange Variation
- Additional SR-11 Features

Otay Mesa East Port of Entry
- Major POE Features
- Additional POE Features

Commercial Vehicle Enforcement Facility

Design Exceptions
- Mandatory Design Exceptions
- Advisory Design Exceptions

No Build Alternative

Decision-making Process

### 2.2.1 State Route 11

**Common SR-11 Major Features Under All Build Alternatives**

Under each of the build alternatives, SR-11 would be constructed as a 2.1-mile, four-lane toll highway, with two lanes in each direction plus auxiliary lanes and connectors (refer to Figure 2-2). It would extend east from the vicinity of Harvest Road (at the future SR-905/SR-125 Interchange) for approximately 1.5 miles, before curving to the southeast near Alta Road and continuing for approximately 0.6 mile to connect with the proposed POE/CVEF site. To link SR-11 to SR-905, it would also be necessary to modify the approved design of the eastern portion of SR-905 that is currently under construction. Proposed SR-11 would be located midway between Otay Mesa Road and Airway Road for most of its length, and would cross four existing or planned local surface streets: Sanyo Avenue, Enrico Fermi Drive, Alta Road, and Siempre Viva Road. Of these, Sanyo Avenue is currently classified by the City of San Diego as a two-lane collector road at the project location, planned to be a four-lane major road at build out. Enrico Fermi Drive is currently classified by the County of San Diego as a collector road, and is planned to be a major road at build out. Alta Road and Siempre Viva Road are not yet built at the project location, but the EOMSP Circulation Element indicates that both are planned to extend into the project site as major roads in the future. Undercrossings, overcrossings or interchanges would be provided at each of these locations, depending on the project alternative. Construction of interchanges and over/undercrossings would be planned in consultation with the County, and would be timed to coordinate with the implementation of local road infrastructure.

Traffic studies have indicated that a four-lane facility would be adequate to accommodate projected traffic through at least 2035. The proposed design would include primarily standard-width main lanes (12 feet wide) and shoulders (10 feet wide), along with standard sight distances. Auxiliary lanes would also be included near the interchanges. Maintenance vehicle pullouts would be incorporated as a feature along the highway within the project footprint.

Median Facilities

The median would be 22 feet wide beginning at Sanyo Avenue, before widening to a 62-foot median width leading up to the POE. Figures 2-3 and 2-4 (*Cross-Sections of SR-11 in the Sanyo Avenue Area: Two Interchange Alternative [with 22-foot Median] and 46-foot Median Variation,* and *Cross-Sections of SR-11 in the Sanyo Avenue Area: One and No Interchange Alternatives [with 22-foot Median] and 46-foot Median Variation*) illustrate the elevated section of SR-11 just east of the Sanyo Avenue undercrossing, where the median would be 22 feet wide to minimize impacts to nearby buildings. The Sanyo Avenue undercrossing is described in more detail later in this chapter. Concrete barriers (three feet tall) would extend along each side of the roadway in the Sanyo Avenue area, and an additional three-foot-tall concrete barrier would extend along the median. Although the number of lanes through this area would vary by alternative, all of the build alternatives would include the 22-foot median in the Sanyo Avenue area. A variation of the build alternatives incorporating a 46-foot median instead of the 22-foot median is presented later in this chapter.

The proposed 62-foot median width in the eastern portion of SR-11 (refer to Figure 2-5, *Typical Cross-Section of SR-11 with 62-foot Median [All Alternatives]*) is intended to make SR-11 adaptable for potential safety and security needs, and to provide the flexibility to construct additional lanes on approach to the POE, if these are found to be necessary in the future to meet future vehicle inspection requirements. This additional R/W would help ensure access to the new POE by emergency responders, facilitate evacuation of the POE if necessary, or allow southbound traffic to be turned around if the POE has to be closed for emergency security concerns.

SR-905 Connections

The eastern portion of approved SR-905 includes ramps from SR-905 to Enrico Fermi Drive, along the approximate alignment of proposed SR-11 and SR-11/SR-905 connectors. With implementation of SR-11, certain modifications to the approved SR-905 would be required, and are included as part of the proposed project. These modifications are described below and illustrated in Figures 2-6a and 2-6b, *Major Project Features West of SR-905/SR-125/SR-11 Interchange [All Alternatives]*, Figure 2-7, *SR-905/SR-125/SR-11 Interchange [All Alternatives]*, and Figure 2-8, *Cross-Sections of SR-905 Modifications Under All Alternatives*.

1. The previously approved ramps between SR-905 and Enrico Fermi Drive would be replaced by the western portion of SR-11 (east of Harvest Road), as well as two-lane connectors in each direction (west of Harvest Road) for the entire distance between SR-905 and SR-11. The northern (westbound) connector would be constructed along approximately the same alignment as the previously approved SR-905 on-ramp from Enrico Fermi Drive, while the southern (eastbound) connector would follow the approved off-ramp alignment for some of its length, but would curve approximately 110 feet further south between SR-905 stations 627+00 and 641+00, to reduce the length of the bridge span over SR-905.

2. On the eastbound side of SR-905, an additional auxiliary lane would be extended between La Media Road and the SR-11 connector, requiring the widening of this area by up to 12 feet.

3. To accommodate weaving movements on westbound SR-905, the SR-11 connector merge with the SR-905 travel lanes would taper to match SR-905 in the vicinity of the Britannia Boulevard Interchange. This merge occurred at the La Media Road Interchange in the previously approved design for SR-905.

4. On the westbound side of SR-905, the proposed project would construct a ramp from SR-11 to tie into the planned SR-905 and SR-125 off-ramps to La Media Road.

The SR-905 modifications to accommodate the proposed SR-11 connections would be entirely within existing state R/W.

Sanyo Avenue Undercrossing

At the Sanyo Avenue undercrossing, SR-11 would be approximately 26 feet above Sanyo Avenue, permitting the local road to pass under the new highway, but allowing no interchange of traffic between them. East of Sanyo Avenue, SR-11 would pass between existing industrial buildings and would be supported by retaining walls for a distance of approximately 1,250 feet as it slopes gradually downward to meet the surrounding grade. The walls and headwall structure at Sanyo Avenue would be a maximum of 26 and 22 feet high on the south and north sides of SR-11, respectively, with the highest portions of the walls located nearest to Sanyo Avenue. Three-foot high barriers would be provided at the edge of pavement along this elevated portion of SR-11. This design is intended to avoid the use of extensive fill slopes to support the elevated roadway, which would have resulted in requirements for additional acquisition of existing developed industrial property along both sides of SR-11 in this area. Proposed SR-11 in this area is similar to the local access connection between SR-905 and Enrico Fermi Drive that was approved as part of the SR-905 project. While an undercrossing would be constructed at Sanyo Avenue under each of the build alternatives, the width of roadway (number of lanes) would vary depending upon the alternative.

The above features would be common to all of the build alternatives. The unique characteristics of each alternative are described below.

Retaining Wall at Siempre Viva Road

A retaining wall of approximately 415 feet in length would run between the eastbound and westbound passenger lanes, gradually rising from about 3 feet in height just north of the easternmost SR-11 toll plaza (north of the proposed POE) to approximately 20 feet high at the Siempre Viva Road overcrossing bridge. This concrete retaining wall would serve to elevate the westbound passenger lane to access SR-11 from the POE.

**Two Interchange Alternative – Additional Major Features**

The Two Interchange Alternative would entail the construction of interchanges along SR-11 at Enrico Fermi Drive and Siempre Viva Road, as well as an overcrossing at Alta Road and an undercrossing at Sanyo Avenue. The Two Interchange Alternative has been evaluated because the community has voiced a preference for a design with interchanges at Enrico Fermi Drive and Siempre Viva Road, consistent with the tentative design for SR-11 that is reflected in the EOMSP. A two-interchange design would provide the greatest possible connectivity to planned and existing Circulation Element roads in the EOMSP area, but presents potential mobility and safety challenges with respect to interchange spacing that would not meet FHWA standards. Figures 2-9a through 2-9d, *Two Interchange Alternative – Major Project Features Sheets* depict the unique features of the Two Interchange Alternative.

Sanyo Avenue Undercrossing

Under the Two Interchange Alternative, SR-11 at the Sanyo Avenue undercrossing would be constructed to a width of 116 feet, and would include an auxiliary lane in each direction, in addition to the two standard travel lanes in each direction. The features of this undercrossing are described above in the section on common SR-11 major features under all build alternatives. Figure 2-3 depicts a cross-section of this segment.

Enrico Fermi Drive Interchange

Under this alternative, an interchange would be constructed along SR-11 at Enrico Fermi Drive, with on- and off-ramps to allow the interchange of traffic between SR-11 and this local road (refer to Figures 2-2 and 2-9b). The Enrico Fermi Drive Interchange would be located approximately one mile east of the SR-905/SR-125/SR-11 Interchange, and approximately one mile west of the interchange proposed at Siempre Viva Road under this alternative. The Enrico Fermi Drive Interchange would be a standard full-diamond design, with on- and off-ramps for both eastbound and westbound SR-11. Automated toll facilities are anticipated along the westbound on-ramp and eastbound off-ramp (refer to Figure 2-9b). This interchange design would allow Enrico Fermi Drive to pass over SR-11. Graded slopes in the vicinity of the interchange would include only cut slopes of up to approximately 44 feet in height.

Alta Road Overcrossing

SR-11 would pass under Alta Road, with no interchange of traffic between the highway and the local road (refer to Figure 2-9c). In the immediate vicinity of Alta Road, grading would involve only fill slopes, estimated to range up to 20 feet high east of the overcrossing. Alta Road would also be elevated on a structure to pass over SR-11.

Siempre Viva Road Interchange

Under the Two Interchange Alternative, an interchange at Siempre Viva Road would be located approximately one mile east of the proposed Enrico Fermi Drive Interchange, and approximately 2,400 feet (0.45 mile) east of the Alta Road overcrossing. The proposed Siempre Viva Road Interchange under this alternative would be a half interchange, with separate ramps for passenger-only and commercial traffic into and out of the new POE/CVEF. This half interchange would also provide an on-ramp from Siempre Viva Road to westbound SR-11; and an off-ramp to Siempre Viva Road from eastbound SR-11. The interchange would not provide access from Siempre Viva Road to the POE via eastbound SR-11, nor would it provide public access to Siempre Viva Road for travelers exiting the POE via westbound SR-11. (A controlled-access road just east of the interchange would permit entry for POE/CVEF employees only.) Details regarding this interchange are described below and depicted in Figure 2-9d:

1. The eastbound through lanes on SR-11 would split approximately 2,300 feet (0.44 mile) west of the combined POE/CVEF site to provide four lanes for commercial-only and passenger-only vehicles. This would include two dedicated lanes for commercial vehicles to access the POE, and two dedicated lanes for passenger vehicles to access the POE and a potential future transit center site, prior to crossing the border into Mexico.

2. Through traffic along Siempre Viva Road would pass over SR-11. A diamond-style off-ramp would be constructed for commercial and passenger-only traffic on eastbound SR-11 to access Siempre Viva Road. This ramp would also include automated toll facilities as previously described for Enrico Fermi Drive. A separate roadway segment would extend south of Siempre Viva Road at the off-ramp junction to provide access to/from toll administration facilities at the POE. A passenger drop-off/pick-up area and the potential future transit center site (to be designed and constructed by others) could also be served by this roadway segment (refer to Figure 2-9d).

3. A loop-style on-ramp would be constructed for northbound passenger-only traffic from the POE to access westbound SR-11. Northbound commercial traffic from the POE would first enter the CVEF for a safety inspection, and then would access westbound SR-11 via a direct roadway link extending west and north from the CVEF site.

4. A diamond-style on-ramp with automated toll facilities would be constructed for traffic from Siempre Viva Road to access westbound SR-11.

5. Graded slopes in the vicinity of this interchange would include cut slopes along the northwestern and southeastern sides of the interchange of approximately 10 to 28 feet in height, and fill slopes in the central portion of the interchange of approximately 10 to 20 feet in height.

The total limits of disturbance for the Two Interchange Alternative would be approximately 490 acres. This includes 206 acres within existing transportation facility R/W west of Sanyo Avenue, 115.2 acres of proposed new SR-11 R/W east of Sanyo Avenue, 6 acres of existing roads, 106.3 acres for the POE and 23.3 acres for the CVEF. In addition, easements totaling 0.7 acre are proposed to the north and south of the SR-11 R/W in the area east of Sanyo Avenue, and a 0.2-acre drainage easement is proposed adjacent to the project R/W on the west side of the Siempre Viva Road overcrossing.

Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative

Several design and operational variations have been proposed which could apply to any of the build alternatives, and are discussed later in this section. The Siempre Viva Road Full Interchange Variation,

however, applies only to the Two Interchange Alternative. The Siempre Viva Road Full Interchange Variation is included for evaluation because it is the community's preferred design. It would provide additional direct access for all movements between Siempre Viva Road and SR-11, but it also presents challenges with respect to vehicle weaving and queues at the border crossing. This variation would construct a full interchange at SR-11/Siempre Viva Road accommodating all movements between Siempre Viva Road and SR-11, instead of the half interchange described above. As shown on Figure 2-10, *Siempre Viva Road Full Interchange Variation*, in addition to the features described for the "baseline" Two Interchange Alternative (with a half interchange at Siempre Viva Road), this variation would include the elements listed below.

- Two separate loop ramps (one for commercial-only traffic and one for passenger-only traffic) would be constructed to provide access from Siempre Viva Road to the POE.
- A loop ramp would be constructed for northbound passenger-only traffic from the POE to access Siempre Viva Road.
- Direct access would be provided for commercial-only traffic to Siempre Viva Road from the CVEF.

**One Interchange Alternative – Additional Major Features**

Under the One Interchange Alternative, proposed SR-11 would be constructed with a single interchange at Alta Road, approximately 1.4 miles east of the SR-905/SR-125/SR-11 Interchange (refer to Figure 2-2 and Figures 2-11a through 2-11d, *One Interchange Alternative - Major Project Features Sheets*). This would be a full interchange accommodating all vehicle movements between Alta Road and SR-11, as described below. SR-11 would have an undercrossing structure at Sanyo Avenue and overcrossings at Enrico Fermi Drive and Siempre Viva Road. The One Interchange Alternative has been evaluated because it would increase the distance between interchanges along SR-11 (compared to the Two Interchange Alternative) to reduce weaving conflicts and improve traffic flows, while still providing one interchange for direct access between SR-11 and the EOMSP area. Interchange spacing under this alternative would still not meet FHWA standards, however.

Sanyo Avenue Undercrossing

Under the One Interchange Alternative, SR-11 at the Sanyo Avenue undercrossing would be constructed to a width of 96 feet, and would include only the two standard travel lanes in each direction (no auxiliary lanes). The features of this undercrossing are described above in the section on common SR-11 major features under all build alternatives. Figure 2-4 depicts a conceptual cross-section of this segment.

Enrico Fermi Drive Overcrossing

SR-11 would pass under Enrico Fermi Drive, with no interchange of traffic between the highway and the local road (refer to Figure 2-11b). In the immediate vicinity of Enrico Fermi Drive, grading would involve only cut slopes, estimated to range up to 44 feet high on either side of the overcrossing. Enrico Fermi Drive would also be elevated on a structure to pass over SR-11.

Alta Road Interchange

Under the One Interchange Alternative, an interchange would be built at Alta Road, instead of an overcrossing. The Alta Road Interchange would be a combined diamond/loop configuration (refer to Figure 2-11c). Specific proposed design features for the Alta Road Interchange include the following:

- A diamond-style on-ramp (with automated toll facilities) for traffic on Alta Road to access westbound SR-11

- A loop-style on-ramp for traffic on Alta Road to access eastbound SR-11

- A diamond-style off-ramp (with automated toll facilities) for traffic on eastbound SR-11 to access Alta Road

- A loop-style off-ramp for traffic on westbound SR-11 to access Alta Road

- In the immediate vicinity of the Alta Road Interchange, grading would involve mostly fill slopes, estimated to range up to 30 feet high

Additional design features and requirements related to the Alta Road Interchange under this alternative that differ from the Two Interchange Alternative are as follows:

- The R/W at the proposed Alta Road interchange would be wider than the R/W for the overcrossing at Alta Road under the Two Interchange Alternative. As depicted on Figures 2-2 and 2-11c, the additional R/W requirement at Alta Road would necessitate additional acquisition of private property, including portions of the vehicle auction yard at this location.

- The R/W at Enrico Fermi Drive would be narrower than for the Two Interchange Alternative, requiring less property acquisition at this location (refer to Figures 2-2, 2-11a and 2-11b). Acreages of property acquisition are discussed in Section 3.5, *Relocations and Real Property Acquisition*.

- Under the One Interchange Alternative, the "last chance exit" for eastbound drivers not intending to enter the POE would be at Alta Road.

SR-11/Siempre Viva Overcrossing

In contrast to the Two Interchange Alternative, SR-11 at Siempre Viva Road would be constructed as an overcrossing. Ramps would still be provided in this location to connect the POE and SR-11, but there would be no access between Siempre Viva Road and SR-11 under the One Interchange Alternative. Despite this difference, several design elements at the SR-11/Siempre Viva Road overcrossing would be similar to the design of SR-11/Siempre Viva Road Interchange under the Two Interchange Alternative, as described below (refer to Figures 2-9d and 2-11d).

- As described for the Two Interchange Alternative, the eastbound through lanes on SR-11 under this alternative would split approximately 2,300 feet (0.44 mile) west of the POE/CVEF site to provide two dedicated lanes each for passenger-only and commercial-only vehicles. Unlike the Two Interchange Alternative design, however, no direct access (i.e., off-ramp) would be provided from eastbound SR-11 to Siempre Viva Road.

- Similar to the Two Interchange Alternative, a roadway segment would extend southeast from Siempre Viva Road under this alternative design to provide access to/from toll administration facilities at the POE, as well as the potential future transit center site.

- Similar to the Two Interchange Alternative, a loop-style connector would be constructed within this alternative for northbound passenger-only traffic from the POE to access westbound SR-11.

Northbound commercial traffic from the POE would access westbound SR-11 via a direct roadway link extending generally west and north from the CVEF site (as described for the Two Interchange Alternative).

- Unlike the Two Interchange Alternative design, no permanent direct access (i.e., on- and off-ramps) would be provided from eastbound SR-11 to Siempre Viva Road or from Siempre Viva Road to westbound SR-11. Until such time as local roadways in the area (including Siempre Viva Road) are built, an interim ramp would allow vehicles dropping off or picking up pedestrians at the POE to access the loop on-ramp to SR-11 via Siempre Viva Road, as shown in Figures 2-9d and 2-11d.

- Cut/fill slopes at Siempre Viva Road overcrossing would be similar to those described for the Siempre Viva Road Interchange.

The total limits of disturbance for the One Interchange Alternative would be approximately 485.6 acres (compared to 490.3 acres under the Two Interchange Alternative). This includes approximately 206.4 acres within existing transportation facility R/W west of Sanyo Avenue, 123.6 acres of proposed new SR-11 R/W east of Sanyo Avenue, and 26.0 acres of existing roads, as well as 106.3 acres for the POE and 23.3 acres for the CVEF. In addition, easements totaling 0.7 acre are proposed to the north and south of the SR-11 R/W in the area east of Sanyo Avenue, and a 0.2-acre drainage easement is proposed adjacent to the project R/W on the west side of the Siempre Viva Road overcrossing.

**No Interchange Alternative – Additional Major Features**

Under the No Interchange Alternative, no interchanges would be constructed along proposed SR-11; all traffic accessing SR-11 from either SR-905 or SR-125 would have to proceed to the POE. An undercrossing structure would be provided at Sanyo Avenue, and overcrossings would be constructed at Enrico Fermi Drive, Alta Road, and at Siempre Viva Road (Figure 2-2 and Figures 2-12a through 2-12d, *No Interchange Alternative - Major Project Features Sheets*). The overcrossing at Alta Road would be similar to that described for the Two Interchange Alternative, while overcrossings at Enrico Fermi Drive and Siempre Viva Road would be similar to those described for the One Interchange Alternative. As in the case of the One Interchange Alternative, the No Interchange Alternative would have a slightly smaller footprint between Sanyo Avenue and Enrico Fermi Drive than would the Two Interchange Alternative, due to the elimination of the Enrico Fermi Drive Interchange and its associated auxiliary lanes (refer to Figures 2-9a and 2-12a); the design of the Sanyo Avenue undercrossing would be similar to that described above for the One Interchange Alternative. In addition, SR-11 under this alternative would exhibit narrower construction and R/W limits at Enrico Fermi Drive and Alta Road than those described for the build alternatives with interchanges at these locations, with consequently lesser partial property acquisitions. The No Interchange Alternative has been evaluated because it would provide the greatest possible interchange spacing, consistent with FHWA standards, and would be the most cost-effective build alternative.

Overall, the limits of disturbance for the No Interchange Alternative would be approximately 464 acres. This includes 206.4 acres within the existing transportation facility R/W west of Sanyo Avenue, 102 acres of proposed new SR-11 R/W east of Sanyo Avenue, 26 acres of existing roads, 106.3 acres for the POE and 23.3 acres for the CVEF. In addition, easements totaling 0.7 acre are proposed to the north and south of the SR-11 R/W in the area east of Sanyo Avenue, and a 0.2-acre drainage easement is proposed adjacent to the project R/W on the west side of the Siempre Viva Road overcrossing.

## Variations on Any of the Build Alternatives

As noted in Section 2.1.1, a number of design or operational variations are being evaluated for one or more of the described build alternatives, as outlined below.

No Toll Variation

The No Toll Variation could apply to any of the three build alternatives, and would involve the operation of SR-11 as a freeway instead of a toll highway. The principal design difference under this variation would be the lack of toll-related structures such as toll administration and FasTrak facilities.

Although state legislation has already approved SANDAG as the tolling agency for future SR-11, and a toll highway is reflected in the RTP, the No Toll Variation is included to facilitate the evaluation of toll-related impacts, particularly with respect to Environmental Justice populations, per Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (refer to Section 3.6 of this EIR/EIS for a discussion of Environmental Justice).

46-foot Median Variation

Under this variation, the SR-11 median would not be 22 feet in the vicinity of Sanyo Avenue, but would instead be 46-feet wide through this area, as depicted in Figures 2-3 and 2-4. This variation could apply to any of the three build alternatives, resulting in a roadway width in the vicinity of Sanyo Avenue of 140 feet for the Two Interchange Alternative and 120 feet for the One and No Interchange alternatives. Unlike the baseline 22-foot median design, the 46-foot Median Variation would not require a design exception in this area, but it would require the additional acquisition of approximately 0.7 acre of the adjacent industrial parcels in the Sanyo Avenue area. The 46-foot Median Variation is included for evaluation because, according to FHWA standards, a 46-foot median is the narrowest standard median allowed without a design exception.

SR-905/SR-125/SR-11 Interchange Variations

Two variations are being considered for the SR-905/SR-125/SR-11 Interchange, referred to as the SR-125 Connector Variation and the SR-905/SR-125/SR-11 Full Interchange Variation. These variations could apply to any of the three build alternatives. The SR-905/SR-125/SR-11 Interchange variations are included for evaluation because they would provide increased connectivity among the three highways served by this interchange.

*SR-125 Connector Variation*

Under the SR-125 Connector Variation, the southbound SR-125 to eastbound SR-11 connector would be added to the interchange (refer to Figure 2-7). A local connector ramp from Enrico Fermi Drive to northbound SR-125 was approved under the SR-905 project; all of the proposed project build alternatives assume a similar direct connector from westbound SR-11 to northbound SR-125. The addition of the complementary southbound SR-125 to eastbound SR-11 connector under this variation would complete the direct link between the two highways. The additional land required to construct this variation is located within existing Caltrans R/W.

*SR-905/SR-125/SR-11 Full Interchange Variation*

The SR-905/SR-125/SR-11 Full Interchange Variation would provide full connectivity among the three roadways by providing the additional direct connectors listed below:

- Westbound SR-11 to eastbound SR-905
- Westbound SR-905 to eastbound SR-11

The addition of these connectors, together with the approved SR-905 and the connectors proposed in the SR-125 Connector Variation, would complete the SR-125/SR-905/SR-11 Interchange (refer to Figure 2-7). To construct this variation within existing Caltrans R/W, a retaining wall of approximately 15 to 26 feet in height and 150 feet in length would be required on the southeast quadrant of the interchange.

**Additional Features of SR-11**

Landscape Treatments/Lighting

Landscaping would incorporate non-invasive, drought tolerant species, per Caltrans standard practices, which specify planting or seeding graded slopes with native species where feasible. The landscape palette and aesthetic treatment of structures (overcrossings, undercrossings, etc.) would be compatible with that developed for SR-905 and SR-125 (south portion). The project would include a variety of ground covers and plantings for permanent erosion control, such as native and drought tolerant species, as well as a variety of rock mulch. All areas adjacent to native plant communities would be planted with native species. All areas would be irrigated; areas planted with native species would be irrigated temporarily until the plants are established. All signage would conform with Caltrans/FHWA standards. Night lighting would be installed along SR-11, including enhanced safety lighting for under- and overpasses and pedestrian scale lighting where appropriate, as needed for safety. Outdoor lighting would be less than 4,050 lumens and fully shielded, in conformance with Caltrans specifications. All fixtures would use low-sodium, amber bulbs to minimize light and glare and to ensure consistency with County lighting standards in the EOMSP area, as well as visual compatibility with surrounding local street lighting. Approximately six-foot high chain link fencing would be required along the SR-11 R/W for access control and security purposes.

Drainage/Water Quality Management Facilities

*Drainage*

Drainage facilities for the proposed SR-11 alignment would be designed to accommodate on-site drainage conditions and conform with applicable regulatory requirements, including the International Boundary and Water Commission (IBWC). Preliminary drainage facility design is based on Caltrans methodologies and the Highway Design Manual (HDM; Caltrans 2007a), and incorporate City and County of San Diego storm water management policies for the Otay Mesa area where feasible and reasonable. Drainage facilities are also designed in compliance with IBWC policies where applicable. For additional information, refer to Section 3.11, *Hydrology and Floodplain*.

*Water Quality Management*

Water quality facilities/measures for the SR-11 alignment would be designed to conform with applicable regulatory requirements, including federal Clean Water Act (CWA), and National Pollutant Discharge Elimination System (NPDES). For additional information, refer to Section 3.12, *Water Quality and Storm Water Runoff*.

Toll Facilities

It is anticipated that Electronic Toll Collection (ETC) technology would be used to collect tolls along on- and off-ramps at all proposed interchanges. Equipment would include overhead gantries and antennae to read transponders; variable message signs to display the tolls; loop or laser detectors to measure traffic volume and speed to help determine toll rates; and cameras to view traffic on the facility. Figure 2-13, *Typical Electronic Toll Collection Facilities*, depicts typical ETC equipment that would be used. In addition, a toll administration building and parking lot would be integrated into the Siempre Viva Road Interchange at the northwestern corner of the POE site. FHWA issued a grant to study border wait times and toll collection strategies for this project; once the study has been concluded, a final determination would be made regarding hardware types and locations of all toll facilities.

Utility Structures and Relocations

Utilities requirements for SR-11 would include water, electricity and communication services. These utilities services would be extended underground within existing or planned roadways, as well as the proposed SR-11 R/W, from existing service lines located to the west and south. Most project-related construction and demolition waste (including but not limited to soil, vegetation, concrete, lumber, metal and cardboard) would be reused and recycled, with the remainder to be hauled to an appropriate landfill facility in the region. For additional information, refer to Section 3.7, *Utilities/Emergency Services*.

Property Requirements

As previously noted, the project would require the acquisition of new R/W. Partial acquisition of property is considered for the entire project, including SR-11, the POE and CVEF, and is therefore presented jointly in this section and not repeated in the separate discussions of the POE and CVEF. The proposed new R/W associated with the project would range from a minimum of approximately 220.5 acres for the No Interchange Alternative to approximately 266.1 acres for the Two Interchange Alternative with the 46-foot Median Variation and the Siempre Viva Road Full Interchange Variation. Detailed information on these property requirements is provided in Section 3.1, *Existing and Future Land Use* and Section 3.5, *Relocations and Real Property Acquisitions*.

Project Grading, Excavation and Construction

*Grading and Excavation*

Under the Two Interchange Alternative with the half interchange design at Siempre Viva Road, grading for proposed SR-11 would entail approximately 1,230,000 cubic yards (cy) of cut and 720,000 cy of fill for the highway main line plus interchanges and under/overcrossings. Implementation of the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative would require an additional 226,500 cy of cut and 98,600 cy of fill. Under the One Interchange Alternative, grading for proposed SR-11 would require approximately 1,080,000 cy of cut and 690,000 cy of fill for the highway main line plus interchanges and under/overcrossings. Under the No Interchange Alternative, approximately 1,040,000 cy of cut and 590,000 cy of fill for the highway main line plus under/overcrossings would be required**.** An additional 900,000 cy of fill would be required for the connectors between SR-11 and SR-905 under any of the project alternatives. Approximate additional fill requirements of the remaining project design variations would be 65,000 cy for the 46-foot Median Variation, 582,000 cy for the SR-125 Connector Variation and 1,068,000 cy for the SR-905/SR-125/SR-11 Full Interchange Variation. These additional fill requirements would apply to any of the build alternatives implementing these variations.

Cut slopes typically would be graded at 2:1 (slope ratio, horizontal: vertical) and fill slopes at 4:1, per Caltrans standard practices. For SR-11, cut slopes are tentatively planned in the area stretching from approximately 500 feet east of the Sanyo Avenue industrial park to the vicinity of Alta Road, and at either

end of the Siempre Viva Road Interchange/Overcrossing. Such slopes are not expected to exceed approximately 36 feet in height. Fill slopes of up to 40 feet in height are tentatively planned at the western end of SR-11 in association with an up to 26-foot high retaining wall through the industrial park at Sanyo Avenue, and fill slopes of up to 20 feet in height are planned in the vicinity of the auto auction yard and the proposed Siempre Viva Road Interchange. Within the Siempre Viva Road Interchange, fill slopes supporting the passenger vehicle lanes and loop ramp would be graded at 2:1.. Highway elevations would be between approximately 550 and 610 feet above mean sea level (MSL), and would generally exhibit a slight overall grade to the south. Proposed grading limits would be up to approximately 400 feet wide along the non-interchange portions of the SR-11 alignment, and up to 1,400 feet wide in the proposed interchange areas. These limits would include all project-related facilities such as manufactured slopes, retaining walls, utility structures/connections, drainage facilities, lighting, fencing, landscaping and construction staging. Limits of grading would not extend beyond the limits of the proposed SR-11 R/W and adjacent off-site easements, which are described for each alternative above.

*Construction Schedules, Equipment and Staging*

Construction of SR-11 is expected to begin in 2013 and last approximately two to three years. Construction is assumed to occur in one phase, with SR-11 and the POE/CVEF being constructed simultaneously, although multiple phases may be required based on funding constraints. The connector lanes between SR-11 and SR-905 and associated improvements to SR-905 could be constructed simultaneously with the completion of this portion of SR-905, depending on the timing of project approval and funding for this portion of the project. All construction activities/staging would take place within existing and proposed limits of disturbance and/or R/W for SR-11, the POE/CVEF, SR-905 and the SR-905/SR-125/SR-11 Interchange, or within adjacent developed areas such as existing parking lots. Portions of this interchange that were approved as part of the SR-905 and SR-125 projects may be constructed simultaneously with the elements proposed for SR-11. The project could be phased such that at-grade intersections would be in place at each of the proposed local roadway interchange locations until the level of service warrants construction of interchanges, which is estimated to occur by approximately 2025.

A Preliminary Traffic Management Plan (TMP) Report was prepared for the project to minimize motorist delays on existing roads during construction (AECOM/Caltrans 2009a). Specific objectives of the TMP include reducing traffic delay or time spent queuing to less than 15 minutes above normal recurring traffic delay; maintaining traffic flow throughout the corridor and the surrounding areas; and providing a safe environment for the workforce and motoring public. To achieve these objectives, the TMP recommends the following measures:

- A Public Awareness Campaign to educate the public about potential construction plans and scheduling
- Motorist Information Strategies, such as signs and radio announcements, to divert traffic volume from the construction site
- Incident Management, including a Construction Zone Enhanced Enforcement Program (COZEEP) that would station CHP Officers and Traffic Management Team units at construction sites to facilitate safer construction and traffic conditions and respond quickly to incidents
- Construction Strategies of selectively utilizing closures of lanes and the Otay Mesa POE to conduct construction activities
- Contingency Plans for instances in which the timely opening of lanes is deemed unachievable
- Alternate Route Strategies that would temporarily divert traffic, mainly utilizing Sanyo Avenue, to allow construction activities while maintaining reasonable access to businesses

Traffic detours and temporary blockages of driveways could occur during construction of under- and overcrossings of existing roadways, such as Sanyo Avenue. The project construction contractor would be required to maintain at least one access to all existing businesses during project construction, and keep adjacent businesses informed of periods of interruption of any usual access route/driveway. In addition, if SR-905 is operational at the time that the proposed connectors with SR-11 and associated auxiliary and travel lanes are constructed within SR-905, the traffic management plan will require modification to address temporary lane closures and traffic diversion around the areas of construction within SR-905.

### 2.2.2 Otay Mesa East Port of Entry

**Major POE Features**

The proposed Otay Mesa East POE would accommodate northbound and southbound commercial and passenger traffic, as well as pedestrians and bicycles. The POE site would be accessed from the north by SR-11, via the previously described system of vehicle lanes and ramps. From the south, entry would be through the proposed Otay II POE on the Mexican side of the border (refer to Figure 2-14, *Conceptual Layout of Mexican Otay II POE)*. Southbound traffic leaving the proposed Otay II POE in Mexico would then enter the non-tolled segment of the Tijuana-Tecate Toll Road. This traffic would also have access to the Tijuana-Rosarito corridor prior to reaching the first toll booth, thus providing binational regional mobility through the new POE (IMPlan 2005; refer to Figure 1-3).

GSA is currently preparing a Program Development Study (PDS) to provide detailed design information for the proposed Otay Mesa East POE. For purposes of the Tier II EIR/EIS analysis, a conceptual development plan has been prepared by Caltrans in cooperation with GSA, based on a related GSA feasibility study (GSA 2008) and a number of current design assumptions (as outlined below). These assumptions represent a conceptual design of the POE, which is subject to revision pending the results of the PDS. After completion of the PDS, the Tier II EIR/EIS conclusions will be reevaluated to determine if additional environmental analysis is necessary.

The Tier II POE site boundary and conceptual layout have been refined since the Phase I PEIR/PEIS was completed during conceptual design of the project. As shown on Figure 2-15, *Conceptual Otay Mesa East POE and CVEF Layout*, the currently proposed Tier II POE site is an irregularly-shaped polygon located 150 feet north of the international border across from the associated Otay II POE site in Mexico. SR-11 would connect with the Otay Mesa East POE site and then continue south across the 150-foot wide strip of federal land patrolled by the U.S. Border Patrol, to the international border where it would connect with the Otay II POE. This connection across the U.S. Border Patrol enforcement area is addressed together with the POE, for the purposes of impact analyses within this EIR/EIS. The proposed limits of disturbance associated with the POE include 106.3 acres for the POE R/W; approximately 7.4 acres of disturbance area within the strip of land under U.S. Border Patrol control; and 0.8 acre of proposed permanent easement and 0.6 acre of proposed temporary construction easement for the relocation of a gas pipeline from within the POE site to instead be adjacent to the eastern boundary of the POE site. These features are depicted on Figure 2-15 and additional details are provided below.

The proposed Otay Mesa East POE R/W would include a graded development pad of approximately 97.9 acres, with the remainder of the 106.3-acre site consisting of graded slopes or other undeveloped area. GSA and CBP jointly determined that 100 acres was the minimum sized site required to meet the current and projected long-term growth requirements for a new POE in the region. It was determined that a scalable POE model of this size would prevent future constraints of the kind encountered at the nearby smaller San Ysidro and Otay Mesa POE sites (GSA 2009c). The developed portion of the POE would accommodate all of the federal agency and security functions currently anticipated to be necessary for the long-term effective operation of an international POE, including the requirements of the following

proposed POE tenant agencies: GSA, CBP, the U.S. Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Immigration and Customs Enforcement – Investigations Office (ICE-IO). Due to concerns regarding potential acts of terrorism, the POE would be designed to conform with the following directives: (1) The October 19, 1995 EO 12977 and addenda, which address the quality and effectiveness of security and protection measures for non-military federal facilities; (2) the Land Port of Entry Design Guide (CBP et.al 2006) and the Security and Information Technology Supplemental Guide (CBP et.al 2007a), both developed by CBP, GSA and the Interagency Security Committee (ISC); and (3) the Department of Defense (DoD) Unified Facilities Criteria (UFC) Manual (UFC 4-010-01), entitled *DoD Minimum Antiterrorism Standards for Buildings* (DoD 2003). Sufficient space has been provided within the proposed POE site to accommodate future southbound inspections, and conceptual facilities are identified (as outlined below), although the design of such facilities cannot be developed until specific requirements are known. Detailed design for all POE facilities is underway as part of the PDS, pursuant to GSA and CBP protocol.

Design and operational assumptions for the proposed POE have been made for analysis purposes, based on current staffing at existing POEs in the region and proposed design/operations at the Otay Mesa East POE. The proposed POE is assumed to employ approximately 400 people. Hours of operation for processing passenger vehicles are anticipated to be 24 hours per day and seven days per week, while hours of operation for processing commercial vehicles are anticipated to be 6 A.M. to 10 P.M. on weekdays and 8 A.M. to 4 P.M. on weekends.

A recent study by the U.S. Environmental Protection Agency (EPA; 2009a) indicates that the potential exists to incorporate anti-idling and truck stop electrification (AI/TSE) approaches at U.S. - Mexico POEs. AI/TSE strategies encourage (or require) drivers to turn off their engines rather than idling while stationary or at very slow speeds. AI strategies identified in the study include the use of traffic controls on existing roadways to process truck crossings in "batches," encouraging or requiring drivers to turn off their engines until their "batch" is allowed to advance; or the use of mandatory or voluntary parking areas where vehicles would turn off their engines until called under an appointment system. TSE technologies provide alternative connections for electricity and communications, so that vehicles can maintain truck refrigeration, air conditioning and other electrically-powered activities without running their own engines. In the case of the proposed project, most congestion and long wait times at the existing San Ysidro and Otay Mesa POEs currently occur on the Mexican side of the border and affect northbound traffic. As such, implementation of AI/TSE strategies would most appropriately be implemented by the Mexican POE authorities at their discretion, which would be outside the jurisdiction of this project. In addition, the Otay Mesa East POE would be a managed facility designed to maintain a 30-minute or less wait time and, therefore, may not represent a model opportunity for AI/TSE. Nonetheless, Caltrans and the regional and binational stakeholders will continue to evaluate its potential use at the proposed project and at other existing POEs.

Following implementation of the proposed project, it is anticipated that the existing Otay Mesa POE would remain open to all commercial, passenger, bus, bicycle and pedestrian traffic, while the existing POE at San Ysidro would continue to accommodate only passenger, bus, bicycle and pedestrian traffic. The GSA feasibility study conducted as part of the Otay Mesa East POE Phase I analysis (GSA 2008) concluded that this would be the most efficient operational arrangement to accommodate projected traffic in the San Diego-Tijuana region. Based on the conceptual development plan, feasibility study and design assumptions, the assumed POE facilities for this EIR/EIS are summarized below and listed/shown in Table 2-1 and on Figure 2-15. The design of the POE is anticipated to be further refined following completion of the PDS.

**Table 2-1**
**SUMMARY OF OTAY MESA EAST POE CONCEPTUAL PLAN FACILITIES**[1]

| Facility No.[2] | Description | Number of Facilities | Approximate Gross Square Footage (GSF) |
|---|---|---|---|
| **Northbound (Inbound/Import) Commercial Facilities** | | | |
| 1 | Commercial Primary Inspection Lanes/Booth/Canopies | 12 | 11,500 |
| 2 | Commercial VACIS Lanes (Building) | 2 | 1,000 |
| 3 | Commercial Bulk Storage Inspection Bins | 5 | N/A |
| 4 | Bird Quarantine Building | 1 | 300 |
| 5 | Commercial Inspection Building | 1 | 60,000 |
| 6 | Commercial Inspection Docks | 96 | 107,000 |
| **Southbound (Outbound/Export) Commercial Facilities** | | | |
| 7 | Commercial Primary Inspection Lanes/Booth/Canopies | 5 | 4,800 |
| 8 | Commercial Inspection Building/Docks | 40 | 44,000 |
| 9 | Commercial Exit Lanes/Booth/Canopies | 6 | 4,800 |
| 10 | Seizure Vault | 1 | 500 |
| **Northbound (Inbound) Passenger Facilities** | | | |
| 11 | Passenger Primary Inspection **Lanes**/Booth/Canopies | 15 | 15,500 |
| 12 | Passenger Primary Head House | 1 | 11,700 |
| 13 | Passenger Secondary Inspection Lanes/Booths/Canopy | 30 | 24,000 |
| **Southbound (Outbound) Passenger Facilities** | | | |
| 14 | Passenger Primary Inspection **Lanes**/**Booth**/Canopy | 5 | 5,200 |
| 15 | Passenger **and Commercial** Inspection Building | 1 | 1,700 |
| **Other Passenger Facilities** | | | |
| 16 | Main Building | 3[3] | 41,400 |
| 17 | Bus Offload Spaces (10 by 60 feet each, Non-building) | 2 | N/A |
| 18 | Bus Plaza Canopy | 1 | 600 |
| 19 | Bus Inspection Space (12 by 60 feet, Non-building) | 1 | N/A |
| **Parking Facilities** | | | |
| 20 | General Parking Lot (Non-building) | 227 | N/A |
| 21 | Commercial Truck Impound Lot (1,750 sf/space, Non-building) | 5 | N/A |
| **Total GSF (excluding non-building spaces)** | | | **334,000** |

[1] Assumed POE design elements are based on the conceptual design shown in Figure 2-15 and the Otay Mesa East POE Feasibility Study (GSA 2008). This design is subject to further refinement following the ongoing Program Development Study being prepared by GSA.
[2] Refer to Figure 2-15 for facility locations.
[3] The main building would include three turnstile gates each for northbound and southbound pedestrian and bicycle traffic.
Source: AECOM (2009a)

## Commercial Facilities

### *Northbound Commercial Vehicle Traffic*

Commercial Import Primary Inspection Lanes/Booths/Canopies. After crossing the border, northbound commercial traffic would be initially directed into one of an estimated 12 primary inspection lanes. Commercial vehicles cleared to enter the U.S. after primary inspection would be directed to the proposed CVEF site for safety inspection before being allowed to access westbound SR-11 (additional description of the CVEF site/process is provided below in this chapter). Commercial vehicles requiring additional (secondary) inspection would be directed to the vehicle and cargo inspection system (VACIS), as outlined below. The northbound commercial primary inspection facilities would include outdoor lighting to support nighttime operations.

Commercial Vehicle and Cargo Inspection System. After completing primary inspection, some northbound commercial vehicles would be directed to the VACIS area for additional inspection, as necessary. This area would encompass two vehicle lanes and a small (approximately 1,000-sf) support building. The VACIS lanes would encompass a non-intrusive, drive-through gamma ray scanning and imaging system used to provide short-duration inspections for up to 150 trucks per hour. After VACIS inspection, northbound commercial vehicles would either be directed to the CVEF site, or routed to the commercial import inspection building/docks for additional inspection as outlined below. The northbound commercial VACIS facilities would include outdoor lighting to support nighttime operations.

Commercial Import Inspection Building/Docks. These facilities would be used to conduct manual inspections for selected northbound commercial vehicles, as necessary. This site would include 96 inspection docks, as well as an approximately 60,000-sf building to provide inspection, enforcement and administrative support services. Ancillary features associated with these facilities would include rooftop Heating, Ventilating and Air Conditioning (HVAC) units and an outdoor backup generator for the inspection building, as well as outdoor lighting to support nighttime operations at the inspection docks.

Bulk Storage Inspection Bins and Bird Quarantine Building. These facilities would be associated with the VACIS and commercial inspection building/docks described above. Ancillary features associated with these facilities would include outdoor lighting to support nighttime operations at the bulk storage bins, and rooftop HVAC units for the bird quarantine building.

*Southbound Commercial Traffic*

As previously described, conceptual facilities have been identified for southbound inspections, as outlined below. The actual design of such facilities cannot be developed until federal mission-specific requirements are known**.**

Commercial Export Primary Inspection Lanes/Booths/Canopies. After entering the POE site, southbound commercial traffic would be directed into a primary inspection lane. The southbound commercial primary inspection facilities would include outdoor lighting to support nighttime operations.

Commercial Export Inspection Building/Docks. These facilities would be used to conduct manual inspections of selected southbound commercial vehicles, and would include an estimated 40 inspection docks and a building to provide inspection, enforcement and administrative support services. The inspection docks and building would occupy approximately 44,000 sf. Ancillary features associated with the described facilities would include rooftop HVAC units for the inspection building, and outdoor lighting to support nighttime operations at the inspection docks.

Commercial Truck Impound Lot. This lot would be located adjacent to the commercial export building/docks, and provide approximately five 1,750-sf spaces to store impounded vehicles. The commercial truck impound lot would include outdoor lighting to support nighttime operations.

Commercial Export Exit Lanes/Booths/Canopies. Prior to crossing the border into Mexico, southbound commercial vehicles would pass through one of the five assumed exit lanes for final clearance and processing. Outdoor lighting would be provided to support nighttime operations.

Seizure Vault. This small (approximately 500 sf) facility would be used to provide temporary secure storage for items confiscated during one or more of the POE inspection processes. This facility would be served by outdoor lighting to support nighttime operations.

Passenger Facilities

*Northbound Passenger Traffic*

Passenger Inbound Primary Inspection Lanes/Booths/Canopies. After entering the POE site from Mexico, northbound passenger vehicles would be routed through one of approximately 15 primary inspection lanes. Additional related facilities for bus traffic would include two 10- by 60-foot bus offload spaces, a 600-sf bus plaza canopy, and one 12- by 60-foot bus inspection space. Outdoor lighting would be provided to support nighttime operations.

Vehicles cleared to enter the U.S. from the primary inspection area would be directed to northbound lanes that would merge onto proposed westbound SR-11.

Passenger Inbound Primary Head House. This structure would be located immediately north of the primary inspection facilities, and would encompass approximately 12,000 sf for facilities/uses such as administrative and office space, a public information area, search rooms and holding cells. Ancillary features associated with the passenger primary head house would include rooftop HVAC units, outdoor backup generators, and outdoor lighting to support nighttime operations.

Passenger Inbound Secondary Inspection Spaces/Canopy. The passenger secondary inspection facilities would be located north of the primary head house, and in between the northbound vehicle lanes. The secondary inspection area would include 30 inspection spaces with canopies. Ancillary features associated with the passenger primary secondary inspection facilities would include backup generators and outdoor lighting to support nighttime operations.

*Southbound Passenger Traffic*

As previously described, conceptual facilities have been identified for southbound inspections, with associated passenger inspection features outlined below. The actual design of such facilities cannot be developed until specific requirements are known.

Passenger Southbound Primary Inspection Lanes/Booths/Canopies. After entering the POE from eastbound SR-11, passenger traffic would be routed through the primary inspection lanes. Vehicles cleared to enter Mexico from the primary inspection area would be directed to the southbound lanes that would cross the international border and enter the proposed Otay II POE in Mexico. Outdoor lighting would be provided to support nighttime operations.

Passenger Southbound Inspection Building. The southbound passenger inspection building would be located just south and east of the outbound primary inspection facilities described above. The proposed inspection building is assumed to encompass approximately 1,750 sf. Ancillary features associated with the southbound passenger inspection building would include rooftop HVAC units, outdoor backup generators, and outdoor lighting to support nighttime operations.

*Other Non-commercial Facilities*

Main Building. The main building would be located between the north- and southbound passenger vehicle access ways, and would provide three turnstile crossings each for north- and southbound pedestrian and bicycle traffic. Ancillary features associated with the main building would include rooftop HVAC units, outdoor backup generators, and outdoor lighting to support nighttime operations.

Pedestrian and Bicycle Facilities. Pedestrian walkways and bike paths would be located in the western part of the POE site, and would allow for access to the potential future transit center that may be constructed on site by others.

General Parking Lot. This lot would be located in between the north- and southbound passenger vehicle lanes and associated facilities, and is tentatively assumed to provide 227 parking spaces for POE employees, per the GSA feasibility study (GSA 2008). Ancillary features associated with the general parking lot would include outdoor lighting to support nighttime operations.

**Additional POE Features**

Architectural Treatments for Structures

Although specific designs are not yet available for the POE, it is assumed that the project architecture would be similar to that of the existing Otay Mesa POE, for the purposes of impact analysis within this EIR/EIS. It is assumed that building exteriors would be treated with stucco, with metal-framed windows and doors with contrasting trim. Building colors are likely to be earth tones. It is assumed that most buildings would be one story (less than 20 feet) in height, with the CVEF building potentially being implemented as two-story buildings up to 34 feet high. Potential pedestrian overcrossings and overhead canopies would be constructed with a minimum vehicular clearance of 17 feet, with structural supports, railings, roofs, etc. extending higher, potentially up to 25 feet.

Fencing/Walls/Signage/Lighting

The entire site is assumed to be surrounded by perimeter fencing consisting of chain link topped with barbed wire, as is currently the case at the existing Otay Mesa POE. The perimeter fences are assumed to be a minimum of 10 feet tall, with smooth or textured plastic slats to screen views. Pedestrian border crossing areas may also include black, wrought iron picket fencing and railings. Chain link fences would be used internally within pedestrian and vehicular areas to separate and/or screen sensitive inspection areas. Concrete barriers, orange traffic cones, or other traffic control devices may also be used to control vehicular traffic flow through the site and to increase the flexibility of the inspection areas.

It is assumed that the entire site would be lit during nighttime hours by minimum-30-foot-tall light posts supporting four to eight halogen floodlights each. Floodlights located in the facility canopies would provide additional lighting for inspection lanes, booths, docks, and other facilities.

Directional and instructional signs within the facilities are expected to incorporate blue English words on white backgrounds and white Spanish words on blue backgrounds. Areas approaching SR-11 would include standard white-on-green highway guide signs (as well as white regulatory and yellow warning signs as needed). Decorative entry signs, fence treatments and monuments may also be incorporated.

Smaller facilities such as trash cans, drinking fountains, metal flag poles, metal light poles and sign posts, concrete bollards, ramps and metal railings may also be placed throughout the site.

Landscaping/Aesthetic Treatments

It is expected that the vehicular inspection areas would support little landscaping. Landscaping planters would be placed in pedestrian and parking areas. Plant palettes would include drought-tolerant ground covers, shrubs, and shade trees. Within the POE, plants would be selected to maintain sight-lines over shrubs and under tree canopies, and to minimize potential hiding places. All landscaping would be irrigated with permanent, efficient, centrally-controlled systems.

Overhead structures and canopies would span entry lanes and cover inspection docks. These would be a minimum of 17 feet high to accommodate bus clearance. Canopies generally would be constructed of open metal-work lattices supported by concrete columns and roofed with corrugated metal. Utility conduits and downlights would be concealed within the latticework.

Individual inspection booths at existing nearby facilities are blue, and the low-intensity radiation scanners are yellow. A comprehensive aesthetics treatment plan would be developed in conjunction with further facility designs and may include common color treatments for booths, canopies, barriers, fences, rails, poles, trash cans, etc. to match the proposed buildings, as well as an entry monument or sign at the northern edge of the POE where drivers would access SR-11.

Drainage/Water Quality Facilities

Drainage and water quality facilities for the proposed POE site would be designed to accommodate specific site conditions, as well as to conform with IBWC, CWA, and NPDES requirements. Refer to Sections 3.11 and 3.12 for additional discussion of drainage and water quality requirements and potential design features.

Utility Structures and Relocations

Anticipated utility needs for the proposed POE include water, sewer, electricity, natural gas, solid waste disposal, and communication services. It is expected that all utilities would be extended from existing developed areas to the north and west, within existing and planned roadways/easements, to serve the POE. The POE is expected to incorporate a number of "green" features such as low water use landscape and plumbing, incorporation of interior and exterior storage areas for recyclables and green waste, and provision of recycling containers within public areas. Most construction waste (including but not limited to soil, vegetation, concrete, lumber, metal and cardboard) would be reused and recycled. Details regarding "green" design/practices for the POE are being developed as part of the ongoing PDS.

Caltrans and GSA are currently coordinating with local utility owners/providers to assess service capabilities and project requirements, as well as to identify and coordinate issues regarding the relocation of existing underground facilities during construction. Currently identified required utility relocations include portions of a 24-inch high-pressure natural gas line in the northeastern portion of the POE site (and the adjacent CVEF) to the east, and the anticipated relocation of a 30-inch high-pressure natural gas pipeline located near (and parallel to) the southern POE boundary. It is anticipated that this relocation will be within the identified limits of disturbance for the POE/CVEF; specific relocation plans will be coordinated with the responsible utility company. The existing and proposed locations of these facilities are shown on Figure 2-15. As shown, the 24-inch natural gas line is currently planned to be relocated within a 20-foot wide permanent easement dedicated to the utility owner, Calpine Corporation. An additional 15-foot wide temporary construction easement would be required east of the natural gas line. Additional information on existing and proposed utilities in the POE site and vicinity are provided in Section 3.5, *Utilities/Emergency Services*.

Project Grading, Excavation and Construction

The proposed POE site would be graded to provide generally level areas suitable for the construction of proposed facilities. Conceptual grading is shown on Figure 2-15, and is subject to revision following the completion of the PDS. Grading for the POE and CVEF combined is tentatively estimated to result in approximately 670,000 cy of cut and 1,525,000 cy of fill. Finished elevations are estimated to be between 534 to 490 feet above MSL, sloping gently downward to the south (refer to Figure 2-15). The tallest cut

slopes are estimated at approximately 30 feet in height, located on the east side of the POE, while the tallest fill slopes are expected to be approximately 18 feet high and would be located on the southwest side of the POE. Although no retaining walls are currently anticipated, it is possible that such walls could be incorporated into the final grading for the POE, following completion of the PDS.

As described above, it is assumed that grading and construction would proceed simultaneously for the POE, CVEF and SR-11, and that these facilities would be constructed in one phase, extending from approximately 2013 to 2015. All proposed construction staging, parking and storage would be accommodated within the proposed limits of disturbance for the three facilities. The proposed POE construction limits would also accommodate all associated manufactured slopes, utility structures/connections, drainage facilities, lighting, fencing, landscaping and construction staging. The construction area may be fenced and lighted at night. A TMP, such as that described above for SR-11, would also be employed during construction of the POE.

Transit Center Site

The proposed overall POE footprint would include space to accommodate a potential future transit center adjacent to the POE. As previously noted, however, the potential transit facility is not part of the proposed project and would be designed and constructed by others. The intent of reserving space for a potential future transit center is to ensure that opportunities to implement transit service to the POE, such as BRT, would not be precluded by future development in the project site vicinity. It is currently anticipated that a future transit center would encompass an approximately two-acre rectangular site in the vicinity of the western POE boundary; however sufficient space is available to accommodate up to a five-acre transit center site if necessary.

### 2.2.3 Commercial Vehicle Enforcement Facility

During the Tier II scoping process, an analysis of CVEF alternatives was undertaken, which determined that construction and operation of a new CVEF adjacent to the proposed Otay Mesa East POE would have considerable security, operational and environmental advantages over providing access from the new POE to the existing CVEF (AECOM/Caltrans 2009b). The proposed site for the new CVEF would include approximately 23.3 acres and would be located east of SR-11 along the northern POE boundary (refer to Figure 2-15). After receiving clearance to enter the U.S. at the POE site, northbound commercial vehicles would be routed into the CVEF facility for safety/weight inspections by the CHP prior to being released onto the regional roadway system. The CHP has not completed a preliminary design for the CVEF, but a conceptual design has been prepared assuming the new CVEF would be similar to the existing CVEF at the Otay Mesa POE. The resulting anticipated CVEF facilities are listed below and shown on Figure 2-15.

- An approximately 7,900-sf administration building, with associated CHP, staff, visitor and short-term commercial vehicle parking
- Two commercial vehicle scales with associated access lanes
- Four commercial vehicle inspection bays with associated inspection lanes
- Long-term and load adjustment commercial vehicle parking
- An approximately 850-sf area available for smog inspection by state or federal agencies

- A secondary access road extending from the northwestern portion of the site to Siempre Viva Road. This road would be used for staff, emergency and/or other authorized vehicle access only, with related movements to and from Siempre Viva Road limited to right-turn out and right-turn in, respectively.

- A six-foot-high perimeter chain link fence with security gates at applicable locations along the site access roads

- A storm water detention basin that would discharge to one of the previously described culverts extending northeast-southwest through the POE and CVEF sites

- Landscaped areas, including several receiving runoff from paved/developed areas and/or discharging into the on-site detention basin

- Manufactured (cut and fill) slopes along the northern and eastern site perimeters, and a six-foot-high fence along the R/W boundary

Commercial vehicles would enter the CVEF via a security gate at the southeastern portion of the site, and would proceed to one of the two scale lanes. After being weighed, vehicles would either be cleared by CHP personnel to exit west to the westbound SR-11 access lanes, or they would be routed to one of the four vehicle inspection bays for additional safety inspection. After completing the vehicle inspection, commercial vehicles would either be cleared to exit (and routed south to SR-11) or directed to park their vehicles for subsequent repairs. Vehicles cleared to exit would continue west to SR-11, while other vehicles would be directed to the long-term commercial vehicle parking area.

Approximately 52 government employees are expected to work at the CVEF, with up to 20 of them on site at any given time. Hours of operation for the CVEF are expected to be compatible with the assumed POE schedule for processing commercial vehicles (i.e., 6 A.M. to 10 P.M. on weekdays, and 8 A.M. to 4 P.M. on weekends). Following project implementation, it is expected that the existing Otay Mesa CVEF would remain open to serve commercial traffic crossing the border at the Otay Mesa POE. A number of potential options for proposed CVEF location, design and operation were assessed as part of the Tier II process, but the location depicted on Figure 2-15 was determined to be the most efficient and practical (refer to Section 2.3.5 for further discussion of this determination).

Architecture/Fencing/Walls//Signage/Lighting

The exterior treatment of the administration building and inspection bays is expected to be similar to that described for the proposed POE. Similar to the existing Otay Mesa CVEF, it is assumed that a six-foot-high chain link fence would be constructed around the CVEF perimeter. It is assumed that smooth or textured plastic slats would be inserted into the chain link for additional visual screening. Chain link fences also are assumed to be used internally to separate and/or screen sensitive inspection areas. Concrete jersey barriers, orange traffic cones, or other traffic control devises may also be used to control vehicular traffic flow through the site and to increase the flexibility of the inspection areas.

The entire site is assumed to be lit during nighttime hours by minimum-30-foot-tall light posts supporting four to eight halogen floodlights each. Floodlights located in the facility canopies would be expected to provide additional lighting for inspection lanes, booths, docks, and other facilities.

Directional and instructional signs within the facilities are expected to include blue English words on white backgrounds and white Spanish words on blue backgrounds. Areas approaching SR-11 would

likely include standard white-on-green highway guide signs (as well as white regulatory and yellow warning signs as needed).

Landscaping/Aesthetic Treatments

Landscaping is assumed to be similar to that of the existing Otay Mesa CVEF, primarily installed around the main building and parking areas. Vehicular inspection areas would support little landscaping. Plant palettes are expected to include drought-tolerant ground covers, shrubs, and shade trees. Plants would be selected to maintain sight-lines over shrubs and under tree canopies, and to minimize potential hiding places. All landscaping would be irrigated with permanent, efficient, centrally-controlled systems.

Overhead structures and canopies may span entry lanes and cover inspection docks. If used, these would be a minimum of 17 feet high to accommodate truck clearance. Canopies are assumed to be constructed of open metal-work lattices supported by concrete columns and roofed with corrugated metal, with utility conduits and downlights concealed within the latticework.

A comprehensive aesthetics treatment plan would be developed in conjunction with further facility designs and may include common color treatments for booths, buildings, canopies, barriers, fences, rails, poles, trash cans, etc. as well as an entry monument or sign at the northern edge of the CVEF where drivers access SR-11.

Drainage/Water Quality Facilities

Drainage and water quality facilities for the proposed CVEF site would be designed to accommodate on-site drainage conditions and conform with applicable regulatory requirements. Refer to Sections 3.11 and 3.12 for additional discussion of drainage and water quality requirements and potential design features.

Utility Structures and Relocations

As previously noted for the POE, utilities required to serve the CVEF are available within the immediate vicinity and include water, sewer, electricity, natural gas and communication services. Caltrans is currently coordinating with local utility owners/providers to assess service capabilities and project requirements, as well as to coordinate the proposed relocation of the previously described 24-inch high-pressure natural gas line that currently traverses both the proposed POE and CVEF sites.

Project Grading, Excavation and Construction

*Grading and Excavation*

The proposed CVEF site would be graded to provide generally level areas suitable for the construction of proposed facilities, with grading figures (i.e., cut and fill volumes) described above under the POE discussion due to the likelihood that grading for both sites would be conducted simultaneously. As shown on Figure 2-15, the CVEF site would be inclined slightly to the west after grading, with elevations ranging between approximately 536 and 556 feet above MSL. Manufactured slopes would be constructed along the northern and eastern CVEF boundaries, including an approximately 40-foot maximum cut slope along the western boundary (and portions of the secondary access to Siempre Viva Road), a 40-foot maximum fill slope on the northwestern boundary, and a 20-foot maximum fill slope along the eastern boundary.

*Construction Schedules, Equipment and Staging*

As described above, it is assumed that grading and construction would proceed simultaneously for the POE, CVEF and SR-11, and that these facilities would be constructed in one phase, extending from approximately 2013 to 2015. All proposed construction staging, parking and storage would be accommodated within the proposed limits of disturbance for the three facilities, as depicted on Figure 2-15. The proposed construction limits would also accommodate all associated manufactured slopes, utility structures/connections, drainage facilities, lighting, fencing, landscaping and construction staging. A TMP, such as that described above for SR-11, would also be employed during construction of the CVEF. The construction area would be fenced and may be lighted at night.

## Construction and Related Costs of the Project

The anticipated costs for R/W acquisition and construction of each build alternative and variation are presented in Table 2-2. The build alternatives (without variations) would range in cost from approximately $519 million for the No Interchange Alternative to $537 million for the Two Interchange Alternative. Implementation of the Siempre Viva Road Full Interchange Variation with the Two Interchange Alternative would increase the cost of this alternative to approximately $558 million. The SR-125 Connector Variation or SR-905/SR-125/SR-11 Full Interchange Variation would add an estimated $25 million or $46 million, respectively, to the cost of any of the build alternatives. The No Toll Variation would reduce project implementation costs by approximately $6 million for any build alternative. The 46-foot median variation would increase property acquisition and construction costs by an estimated $ 1.7 million.

**Table 2-2**
**SUMMARY OF CONSTRUCTION AND RELATED COSTS OF THE PROJECT**

| Alternatives/Variations and Cost Categories | | Two Interchange Alternative | | One Interchange Alternative | No Interchange Alternative |
|---|---|---|---|---|---|
| | | **Baseline Alternative** | **With Siempre Viva Road Full Interchange Variation** | | |
| **SR-11**[1] | Construction and Support Costs | $ 186,815,000 | $ 201,225,000 | $ 183,995,000 | $ 177,041,000 |
| | R/W Costs | $ 46,685,000 | $ 52,975,000 | $ 45,505,000 | $ 38,459,000 |
| **POE** | Construction and Support Costs | $ 229,000,000 | $ 229,000,000 | $ 229,000,000 | $ 229,000,000 |
| | R/W Costs[2] | $ 35,958,000 | $ 35,958,000 | $ 35,958,000 | $ 35,958,000 |
| **CVEF** | Construction and Support Costs | $ 38,600,000 | $ 38,600,000 | $ 38,600,000 | $ 38,600,000 |
| | **Total Build Alternatives** | **$ 537,058,000** | **$ 557,758,000** | **$ 533,058,000** | **$ 519,058,000** |
| 46-foot Median Variation: Additional Construction and Support Costs | | $ 1,200,000 | $ 1,200.000 | $ 1,200.000 | $ 1,200.000 |
| Additional R/W Costs | | $ 500,000 | $ 500.000 | $ 500.000 | $ 500.000 |
| | **Total with 46-foot Median Variation** | **$ 538,758,000** | **$ 559,458,000** | **$ 534,758,000** | **$ 520,758,000** |
| SR-125 Variation: Additional Construction and Support Costs | | $ 25,300,000 | $ 25,300,000 | $ 25,300,000 | $ 25,300,000 |
| | **Total with SR-125 Connector Variation**[3] | **$ 562,358,000** | **$ 583,058,000** | **$ 558,358,000** | **$ 544,358,000** |
| SR-905/SR-125/SR-11 Full Interchange Variation Additional Construction and Support Costs | | $ 46,200,000 | $ 46,200,000 | $ 46,200,000 | $ 46,200,000 |
| | **Total with SR-905/SR-125/SR-11 Full Interchange Variation**[3] | **$ 583,258,000** | **$ 603,958,000** | **$ 579,258,000** | **$ 565,258,000** |
| No Toll Variation: Reduction in Construction and Support Costs | | $ (6,000,000) | $ (6,000,000) | $ (6,000,000) | $ (6,000,000) |
| | **Total with No Toll Variation**[3] | **$ 531,058,000** | **$ 551,758,000** | **$ 527,058,000** | **$ 513,058,000** |

[1] Includes SR-905 improvements between Britannia Blvd and SR-905/SR-125/SR-11 Interchange

[2] Includes the R/W costs for both the POE and the CVEF

[3] No R/W costs because of location within Caltrans R/W

### 2.2.4 Design Exceptions

The discussion below summarizes mandatory and advisory design exceptions that would be required by each of the project build alternatives and variations. Further information is contained in Appendix B.

Mandatory Design Exceptions

For all of the build alternatives, the distance between the SR-905/SR-125/SR-11 Interchange and the La Media Road Interchange would be below the mandatory standards, due to the original design of SR-905. Additionally, the Two Interchange Alternative would not meet the mandatory distance between the southbound SR-125 to eastbound SR-11 connector ramp and the Enrico Fermi Drive Interchange. The One Interchange Alternative would require a similar design exception because it would not meet the mandatory distance between this freeway ramp and the Alta Road interchange. Only the No Interchange Alternative would meet the mandatory distance between the SR-905/SR-125/SR-11 Interchange and the nearest local street interchange (although the design exception for the distance to La Media Road would still be required). The addition of any of the project variations would not lengthen the distance from the freeway-to-freeway interchange and the nearest local road interchange, and the SR-905/SR-125/SR-11 Interchange design variations would shorten this distance; in all cases, a design exception would be required. The SR-905/SR-125/SR-11 Full Interchange Variation under any alternative would not meet the mandatory standard for exit ramp shoulder width at both connectors between SR-905 and SR-11.

Advisory Design Exceptions

For all of the build alternatives, the SR-905 ramps to and from SR-11 would not meet advisory standards for branch connection details. A design exception would also be required for shortening the auxiliary/merge lanes between SR-905 and Enrico Fermi Drive originally approved under the SR-905 project.

The 22-foot median near the Sanyo Road undercrossing would require an advisory design exception for all of the build alternatives. The 46-foot Median Variation would avoid this design exception.

Neither the distance between the Siempre Viva Road Interchange and the Enrico Fermi Drive off-ramp under the Two Interchange Alternative, nor the distance between the Alta Road Interchange and the passenger ramp to the POE under the One Interchange Alternative, would meet advisory standards for weave length. Addition of the Siempre Viva Road Full Interchange Variation to the Two Interchange Alternative would further shorten the weave distance, and would also require a design exception for reduced distance between successive exits as vehicles make the choice between exiting at Siempre Viva Road or continuing into the POE via the passenger or commercial lanes. The No Interchange Alternative would not require a weaving distance design exception.

With the SR-125 Connector Variation or the SR-905/SR-125/SR-11 Full Interchange Variation added to any of the build alternatives, the divergence angle at ramp exits would exceed the advisory standards.

Furthermore, inclusion of the SR-905/SR-125/SR-11 Full Interchange Variation with any of the build alternatives would require additional advisory design exceptions, due to reduced design speeds at ramp exits, and the lack of a passing lane.

### 2.2.5 No Build Alternative

Under the No Build Alternative, none of the project components described under the build alternatives would be constructed, including SR-11 (and associated interchanges, under/overcrossings, connectors, SR-905 modifications, and toll-related facilities), the Otay Mesa East POE (including the potential future transit center site), and the CVEF site. The existing Otay Mesa POE and associated CVEF, as well as the existing San Ysidro POE, would remain open and operational. The SR-905/SR-125 Interchange would be implemented as previously approved under the SR-905 project, including the connectors between SR-905 and SR-125, local access ramps between SR-905 and Enrico Fermi Drive (along a similar alignment as proposed SR-11), and the associated westbound to northbound SR-125 ramp from Enrico Fermi Drive.

### 2.2.6 Decision-making Process

After the public circulation period, in accordance with NEPA and CEQA, FHWA and Caltrans will consider all comments, identify a preferred alternative, and make the final determination of the project's effect on the environment. In accordance with CEQA, Caltrans will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. With respect to NEPA, FHWA will verify, as needed, compliance with all federal laws, regulations and requirements, and document and explain its decision regarding the selected alternative, project impacts, and mitigation measures in a ROD in accordance with NEPA.

## 2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

In addition to the Tier II alternatives described above for SR-11 (which are based on the Phase I Western Alternative), FHWA/Caltrans considered the Central Alternative and the No Action Alternative in the Phase I analysis (Caltrans 2008a). In 2000, the PSR for SR-11 (Caltrans 2000) considered not only the Western, Central and No Action alternatives, but also an Eastern Alternative and a Local Road Alternative. A TSM/TDM Only Alternative was also evaluated as part of the Tier II analysis, along with an additional design variation for the Two Interchange Alternative (as described in Section 2.2.1 of this EIR/EIS). A number of design alternatives were also considered for the proposed CVEF involving the use of facilities at the existing Otay Mesa CVEF and the provision of secured access for commercial vehicles from the proposed East Otay Mesa POE. All of these alternatives and variations were considered during the process of developing the proposed project alternatives analyzed in this Tier II EIR/EIS, but were eliminated from further consideration for reasons described below.

Prior studies have focused on alternative locations for the proposed facilities. The Phase I PEIR/PEIS culminated in the identification of the currently proposed SR-11 alignment and POE location as the preferred location, and a conditional Presidential Permit was granted for the POE in this location. With alternative locations having been addressed in prior studies and a preferred location identified, this tiered EIR/EIS addresses only design alternatives.

### 2.3.1 Central Alternative

The Central Alternative included an approximately 2.5-mile-long SR-11 corridor extending east from the approved SR-905/SR-125 Interchange at Harvest Road between Otay Mesa Road and Airway Road, continuing through the Enrico Fermi Drive and Siempre Viva Road interchanges, and terminating at the northern edge of the proposed Central POE Site.

The Central Alternative studied in the PSR would have committed nearly 25 more acres of currently undeveloped land to transportation-related uses, and would have impacted more areas occupied by sensitive wetlands and Diegan coastal sage scrub habitat than the Western Alternative on which the current alternatives are based. In addition, the Central Alternative would have had the potential for more substantial edge effects on Diegan coastal sage scrub (in which the federally listed threatened coastal California gnatcatcher has been detected) and non-native grassland communities in the eastern portion of the area studied in Phase I. The Central Alternative would also have required more earthwork and would have had a higher construction cost than the Western Alternative. Because of the anticipated additional impacts related to sensitive biological resources and grading requirements, the Central Alternative was eliminated from further consideration during the Phase I analysis.

### 2.3.2 Eastern Alternative

The Eastern Alternative would have included an approximately 2.8-mile-long SR-11 corridor, extending eastward from the approved SR-905/SR-125 Interchange at Harvest Road between Otay Mesa Road and Airway Road, continuing through the Enrico Fermi Drive and Siempre Viva Road interchanges, and terminating at the northern edge of an Eastern POE site. It is assumed that the Eastern POE site would have been similar in terms of access, size, and conceptual layout to the Western and Central POE sites described in the PEIR/PEIS.

The PSR assumed that the Eastern SR-11 Corridor would have accommodated four standard width main lanes, standard width shoulders and median facilities, standard sight distances, associated long-term drainage/retention facilities, and temporary construction impacts. It estimated that the Eastern Alternative would have required approximately 141 acres of new R/W and 99 acres for the Eastern POE site, and would have traversed a developed Sempra Energy utility easement.

Biological resources, cultural resources and hazardous materials studies were conducted within a study area that included the Western, Central and Eastern alternatives in 2000 and 2002. Based on these studies, it was determined that the Eastern Alternative would have substantially greater impacts to sensitive biological resources (e.g., protected habitat, wetlands/waters of the U.S. and associated species listed as rare, threatened or endangered by the USFWS). This would have included impacts to Diegan coastal sage scrub, southern riparian scrub, potential vernal pools, and sensitive plants and animals, including the federally listed as threatened and state listed as endangered Otay tar plant, and the federally listed as endangered Quino checkerspot butterfly.[1] In addition, the Eastern Alternative would have impacted a cultural resource site that was found to be an intact quarry/lithic workshop containing over 1,000 pieces of debitage, cores and lithic tools, as well as a mano, with evidence of possible subsurface deposits. This site was not tested, because it was determined that the Eastern Alternative would be rejected for all of the reasons described above. No substantial hazardous materials issues were identified for the Western, Central or Eastern alternatives.

[1] In addition, the federally listed as threatened California gnatcatcher was observed slightly northeast of the proposed Eastern POE site.

Based on the potential for much greater impacts to biological and cultural resources and greater R/W and construction costs associated with the Eastern Alternative, compared to the Western and Central alternatives, as well as potential complications associated with impacting an existing Sempra Energy utility easement, the Eastern Alternative was eliminated from further consideration in Phase I, before the development of the PEIR/PEIS.

### 2.3.3 Local Road Alternative

The Local Road Alternative would have provided for a limited-access and non-controlled-access facility, expanding and extending an existing road to access the POE site. Three variations of this alternative were identified in the SR-11 PSR, involving the extension of Otay Mesa, Airway or Siempre Viva roads (Caltrans 2000). Each of these variations could have connected with any of the three alternative POE sites associated with the previously described Western, Central and Eastern alternatives. The existing road would also have been extended to the east beyond Alta Road, and a north-south connection to the POE (not currently identified in the Circulation Element of the County General Plan) would have been provided to link the extended road to a proposed POE. Long-term drainage/retention facilities were not considered for any of these alternatives, and the variations based on Airway and Siempre Viva roads would have included no intersections with local roads. The Otay Mesa Road variation would have included an intersection configuration at Enrico Fermi Drive.

The PSR addressed one set of assumptions for all of the Local Road Alternative variations, estimating that this alternative would have required approximately 198 acres of R/W, including 99 acres for the Local Road Alternative POE site.

The PSR also determined that the Local Road Alternative would have provided substantially less mobility than would a highway for interregional cross-border traffic, since local roadways and intersections were not designed to handle the anticipated high volume of truck traffic. Local traffic circulation and access to local businesses would potentially have been disrupted, as currently occurs due to queuing associated with congestion at the existing Otay Mesa POE. Emissions associated with such congestion would also likely have been higher under the Local Road Alternative. Accordingly, it was determined that none of the Local Road Alternative variations would have met the identified long-term purpose and need of the SR-11 and Otay Mesa East POE program, so this alternative was eliminated from further consideration in Phase I, before the development of the PEIR/PEIS.

### 2.3.4 TSM/TDM Only Alternative

This alternative involved the use of TSM/TDM measures as a "stand alone" alternative to the proposed SR-11, POE and CVEF facilities. TSM strategies consist of actions that enhance the efficiency of existing roadways without requiring additional through lanes, by increasing the number of vehicle trips that roadways can accommodate. Depending on individual site conditions, TSM measures may include facilities such as ramp metering and auxiliary lanes, as well as the use of ITS such as CCTV, changeable message signs (CMS), TMS and TMC connections to monitor and improve traffic conditions. In addition, TSM strategies also encourage the combined use of automobile facilities, public/private transit, ridesharing, and bicycle/pedestrian improvements to create and enhance a unified and multi-modal urban transportation system.

TDM focuses on regional strategies for reducing the number of vehicle trips and vehicle miles traveled, as well as increasing vehicle occupancy. Specifically, this can include the provision of ridesharing (car-pool or HOV) lanes, implementation of multi-modal facilities and services to increase transportation options, provision of transit-oriented facilities to support bus and pedestrian traffic, connections to BRT and bicycle facilities (e.g., bike routes and staging areas), implementation of variable congestion pricing (as previously described), provision of dedicated commercial and passenger vehicle lanes, and use of extended POE hours of operation.

Implementation of the TSM/TDM Only Alternative would have entailed one of the following two potential options:

1. Constructing the proposed Otay Mesa East POE/CVEF (or some variation of these facilities) without SR-11, and implementing TSM/TDM measures at the POE/CVEF and one or more local roadways used to access the site; or

2. Not constructing any of the proposed project facilities and implementing TSM/TDM measures at other local/regional POE sites.

As described above in Section 2.3.3, Local Road Alternative, the potential use of local roadways to provide access to the Otay Mesa East POE/CVEF in lieu of SR-11 was considered and rejected as an alternative to the proposed project, since it would not meet the identified purpose and need of the proposed project. Based on this conclusion, the use of either of the identified options under the TSM/TDM Only Alternative would also not meet the project purpose and need, as both would involve the use of local roadways for border access in lieu of SR-11.

In addition, based on the description of existing and projected border crossing traffic volumes in Section 1.2.2, Need for the Project, the TSM/TDM Only Alternative would not adequately address the need for increased border transportation capacity. Specifically, U.S. - Mexico trade has increased substantially since the passage of NAFTA, with over 80 percent of merchandise shipped across the border by truck (DOT 2007b). Passenger traffic has also risen dramatically in the past decade, with over 60 million border crossings in the San Diego County/Baja California border area during 2006 (SANDAG/Caltrans 2006a). The number of primary inspections (commercial and passenger) at the existing Otay Mesa POE, for example, increased over 80 percent between 1996 and 2006, and is projected to climb an additional 50 percent by 2025. It is also anticipated that the total number of primary inspections will increase by nearly 30 percent during the same period at both the San Ysidro POE, and Tecate POEs (Caltrans/GSA 2007). These existing and projected increases, coupled with the recent adoption of additional border crossing security requirements, have highlighted the fact that existing border transportation infrastructure in the San Diego-Tijuana region is not designed to accommodate current or anticipated future traffic volumes.

While the implementation of TSM/TDM measures can provide some congestion relief by increasing transportation efficiency and reducing trips as noted, they are not sufficient, in and of themselves, to effectively address existing or future transportation capacity issues in the San Diego-Tijuana border region. Based on these conditions, as well as the fact that many TSM/TDM measures are currently (or proposed to be) implemented at existing and proposed POE facilities (including the proposed project as described), the TSM/TDM Only Alternative is not considered a viable option to the proposed project and is not carried forward for impact analysis in this EIR/EIS.

### 2.3.5 CVEF Alternatives

Three alternative scenarios were identified for the proposed CVEF at the Otay Mesa East POE, based on criteria including CHP requirements, project schedule, travel times, environmental factors and cost. These alternatives all involved the use of the existing CVEF at the Otay Mesa POE and a secured access road for commercial vehicles from the Otay Mesa East POE, with two options also including limited inspection facilities at a proposed new Otay Mesa East CVEF site. The CVEF alternatives were evaluated in a separate study (AECOM 2009b), as summarized below. In addition to the three CVEF alternative scenarios, several alternative locations for a new CVEF were also evaluated during the Tier II project scoping phase. It was determined that the currently proposed CVEF location and orientation provided the most efficient traffic flow from the POE to the CVEF and then to SR-11, and allowed for sufficient R/W for each facility and spacing between the three facilities.

### CVEF Alternative A - Secured Access Road to the Existing Otay Mesa CVEF

Under this alternative, the proposed CVEF facilities adjacent to the Otay Mesa East POE would not be constructed, and a secured access road would be built from the Otay Mesa East POE to the existing Otay Mesa CVEF. All applicable inspections of northbound commercial vehicles crossing the border at the Otay Mesa East POE would be conducted at the existing Otay Mesa CVEF site, and commercial vehicles would then be routed onto existing local roadways following release by the CHP. Based on this scenario, the design of nearby interchanges on SR-905 and SR-11 (as well as local roadways) would need to accommodate the associated high commercial traffic volumes. This alternative would also require modification of the existing Otay Mesa CVEF site to accommodate commercial traffic from the secured access road, including expansion of existing scale capacity and provision of two additional lanes to access the existing weigh-in-motion (WIM) inspection stations.

The secured access road under this design would likely encompass a two-lane, one-way facility, with a 10-foot wide inside shoulder for emergency vehicle access and an 8-foot wide outside shoulder. Security requirements for the described access road would be determined based on criteria including proximity to the international border, but would likely include measures such as concrete barriers or a CBP-approved fence along both sides of the road. The secured access road would also traverse several parcels between the Otay Mesa CVEF and the Otay Mesa East POE, with approximately 15 acres of associated R/W acquisition required. These requirements could potentially be more extensive and/or include construction of additional grade-separated access crossing facilities if the proposed access road alignment were to "landlock" portions of these parcels (i.e., trapping these areas between the secured corridor and the international border), thereby reducing their development potential.

While this alternative would have met applicable CHP capacity and mission requirements for commercial vehicle inspections, it was eliminated from further consideration based on the following factors: (1) potential R/W acquisition and/or construction requirements (and associated costs) from possible "landlocking" of parcels bisected by the secured access road; (2) increased travel time and potential delays for northbound commercial vehicles; (3) potential delays to the overall project schedule (and related costs) due to additional technical and environmental review requirements for the secured access roadway corridor and the existing Otay Mesa CVEF modifications; and (4) additional biological impacts/mitigation requirements (and associated costs) from construction of the secured access road corridor, including substantial impacts to jurisdictional wetlands, vernal pools, and basins with fairy shrimp.

### CVEF Alternative B - WIM Stations and Access to the Existing CVEF via Public Roads

This alternative would entail constructing two WIM stations at the currently proposed Otay Mesa East CVEF site, with cargo and weight inspections to be conducted therein by CBP and CHP personnel, respectively. Vehicles cleared during this process would be released to SR-11, while those requiring additional inspection would be routed to the existing Otay Mesa CVEF via Siempre Viva Road. Vehicles dispatched to the Otay Mesa CVEF would be affixed with an electronic tracking device to ensure compliance with required CVEF inspection.

This alternative was eliminated from further consideration based on the following factors: (1) while adequate scale capacity would be provided under this scenario at the proposed WIM stations, additional garage inspection bays could be required at the existing Otay Mesa CVEF and it is unclear if CHP mission requirements related to issues including enforcement, safety and liability would be met; (2) increased travel time would result for northbound commercial vehicles routed to the Otay Mesa CVEF for additional inspection; (3) potential delays to the overall project schedule (and related costs) could

occur as a result of research requirements for an acceptable electronic tracking system; and (4) this alternative could require improvements to Siempre Viva Road by local agencies to ensure adequate capacity for commercial vehicle traffic, potentially resulting in additional biological impacts/mitigation requirements (and associated costs).

**CVEF Alternative C - WIM Stations and Secured Access to the Existing Otay Mesa CVEF**

This alternative would combine elements of CVEF Alternatives A and B, encompassing a WIM station at the currently proposed Otay Mesa East CVEF site and a secured access road from the Otay Mesa East POE to the existing Otay Mesa CVEF. The design and operation of these facilities would be the same as described above for similar facilities in Alternatives A and B.

While this alternative would have met applicable CHP capacity and mission requirements for commercial vehicle inspections, it was eliminated from further consideration based on similar factors as described for Alternatives A and B, including: (1) potential R/W acquisition and/or construction requirements (and associated costs) as previously described from possible "landlocking" of parcels bisected by the secured access road; (2) increased travel time for northbound commercial vehicles routed to the Otay Mesa CVEF for additional inspection; (3) potential delays to the overall project schedule (and related costs) due to additional technical and environmental review requirements for the secured access roadway corridor and the existing Otay Mesa CVEF modifications; and (4) additional biological impacts/mitigation requirements (and associated costs) from construction of the secured access road corridor, including impacts to jurisdictional wetlands.

## 2.4 PERMITS AND APPROVALS NEEDED

The following program-level permits, reviews and approvals were acquired during implementation of Phase I:

| Agency | Permit/Approval | Status |
|---|---|---|
| U.S. Department of State | Conditional Presidential Permit for the POE (included as Appendix A) | Approved |
| U.S. General Services Administration | Approval of preferred POE site alternative | Approved |

The following permits, reviews and approvals may be required for project-level implementation in Tier II, depending on identified project impacts:

| Agency | Permit/Approval | Status |
|---|---|---|
| U.S. Department of State | Full Presidential Permit for the POE | Pending |
| U.S. Fish and Wildlife Service | Endangered Species Act Section 7 Consultation for Threatened and Endangered Species | Pending |
| U.S. Army Corps of Engineers | CWA Section 404 Nationwide Permit for filling waters of the United States | Pending |
| California Regional Water Quality Control Board | (1) Clean Water Act Section 401 Water Quality Certification for discharge of dredge and fill materials into federal waters, or Waste Discharge Requirements for non-federal waters and/or other discharges; and | Pending |

| Agency | Permit/Approval | Status |
|---|---|---|
| | (2) conformance with NPDES Caltrans Statewide Permit and/or Groundwater Extraction/Disposal Permit for the SR-11 and the POE/CVEF sites. | |
| California Department of Fish and Game | California Fish and Game Code 1602 Agreement for Streambed Alteration Section 2080.1 Agreement for Threatened and Endangered Species | Pending |
| State Water Resources Control Board | (1) Conformance with Statewide Caltrans NPDES Permit for SR-11 ; and (2) Conformance with NPDES General Construction Permit for the POE/CVEF sites | Pending |
| County of San Diego and City of San Diego | Freeway Agreements | Pending |
| International Boundary and Water Commission | Approval of project grading/drainage designs within IBWC jurisdiction along the border | Pending |
| California Transportation Commission | SR-11 Route Adoption | Pending |

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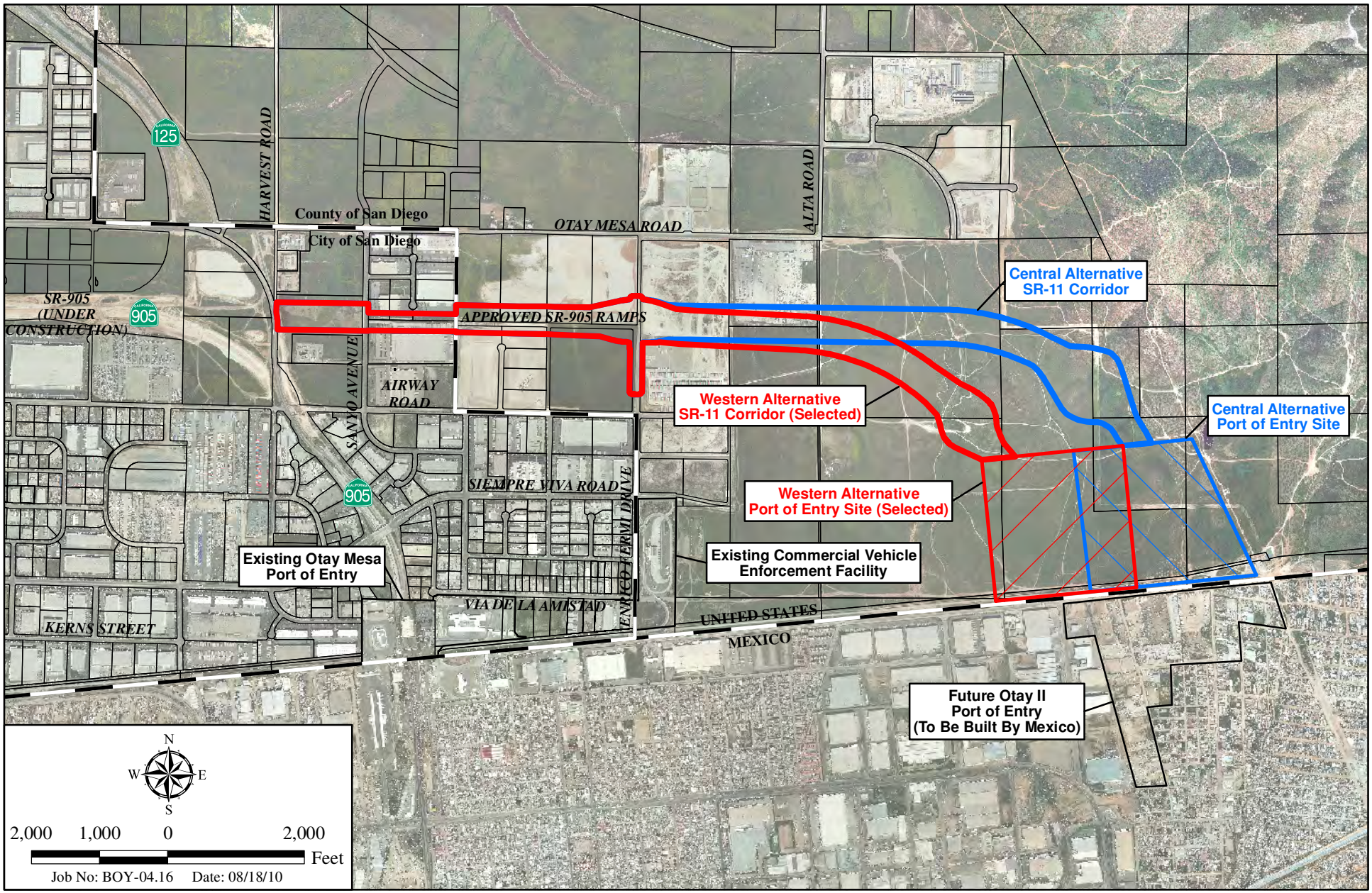


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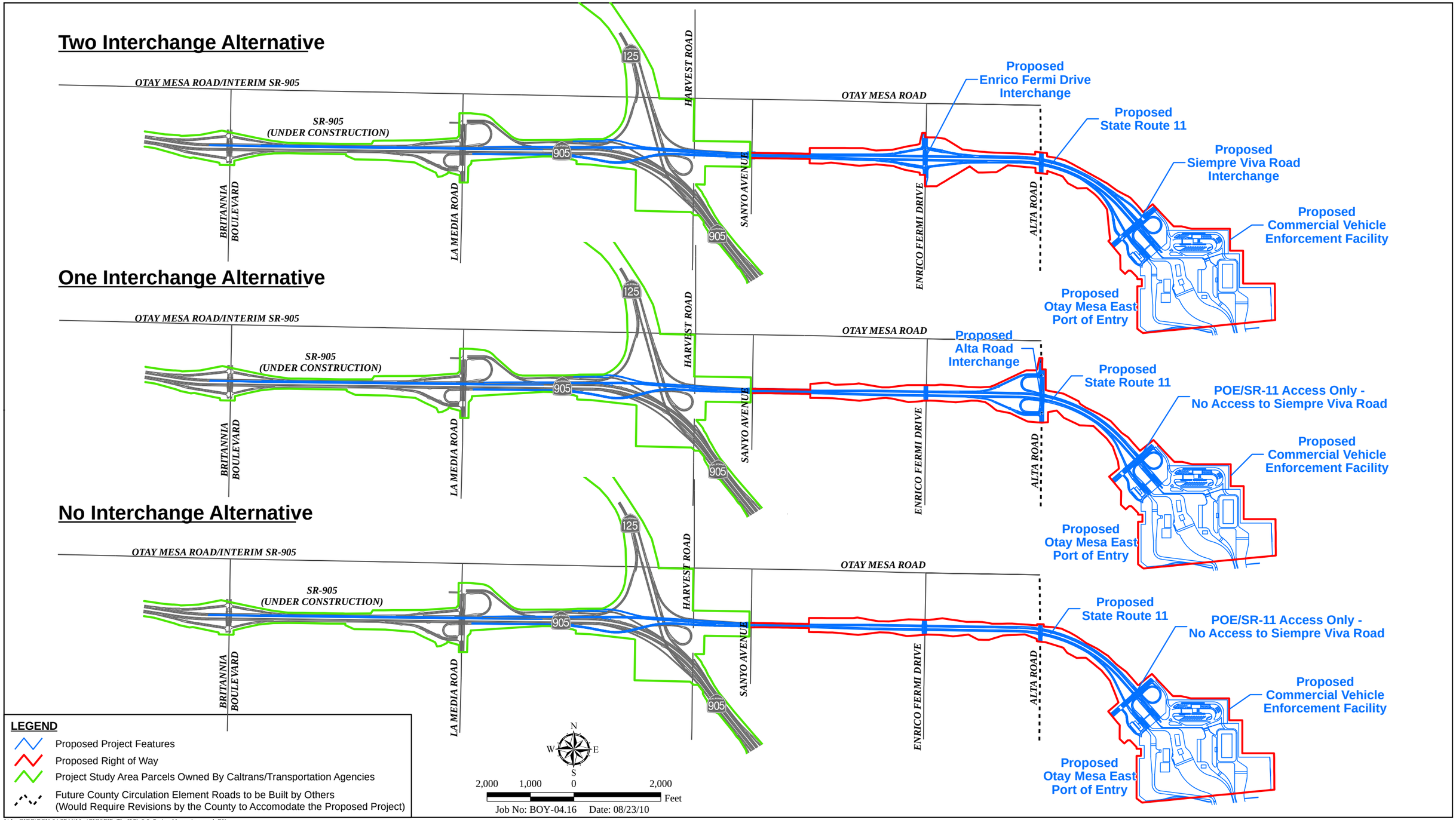
# Phase I Program Alternatives

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-1

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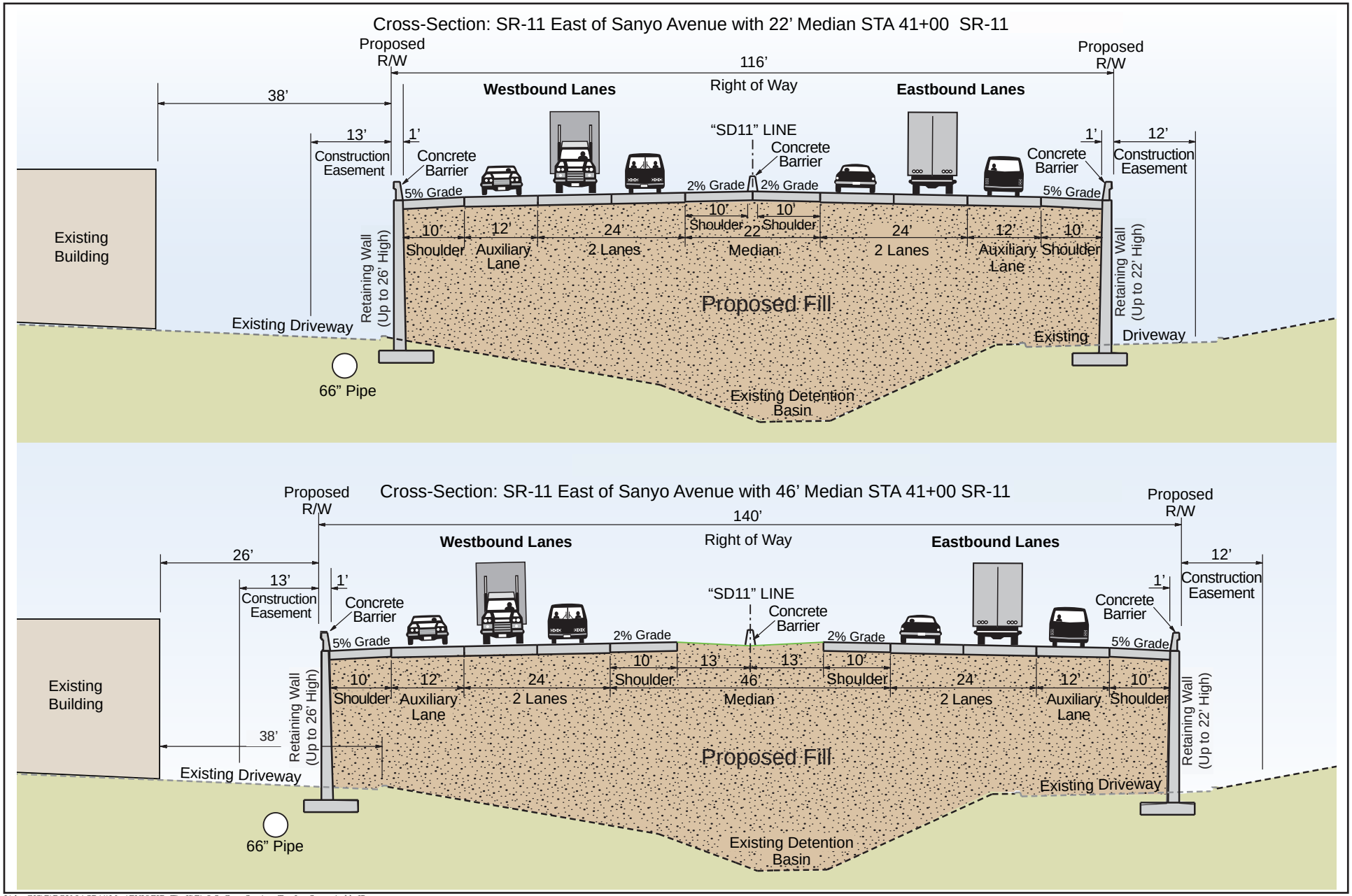
# Comparative Overview of the Project Build Alternatives

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-2

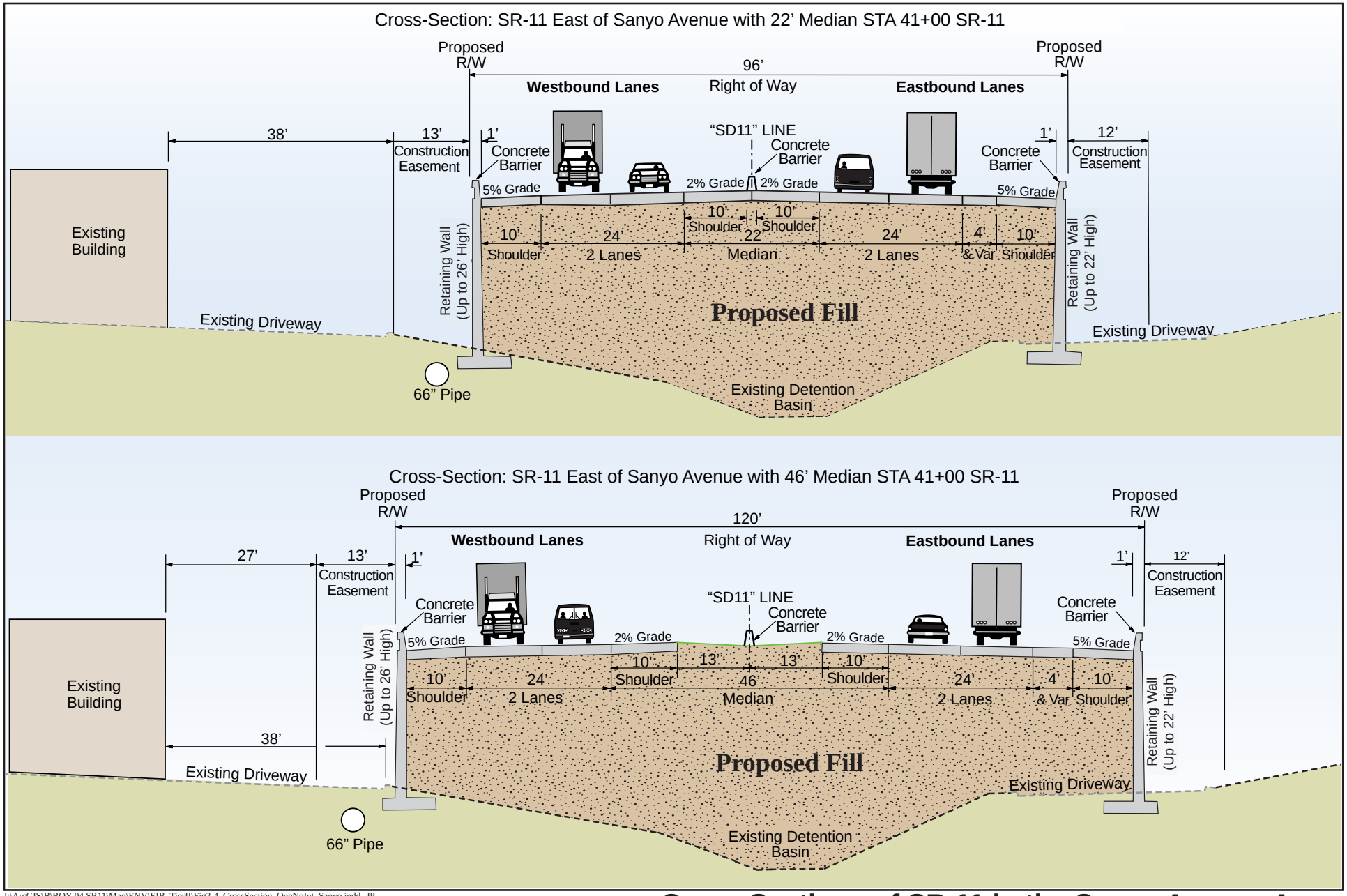



I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig2-3_CrossSection_TwoInt_Sanyo.indd -JP

**Cross-Sections of SR-11 in the Sanyo Avenue Area: Two Interchange Alternative (with 22-foot Median) and 46-foot Median Variation**

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-3

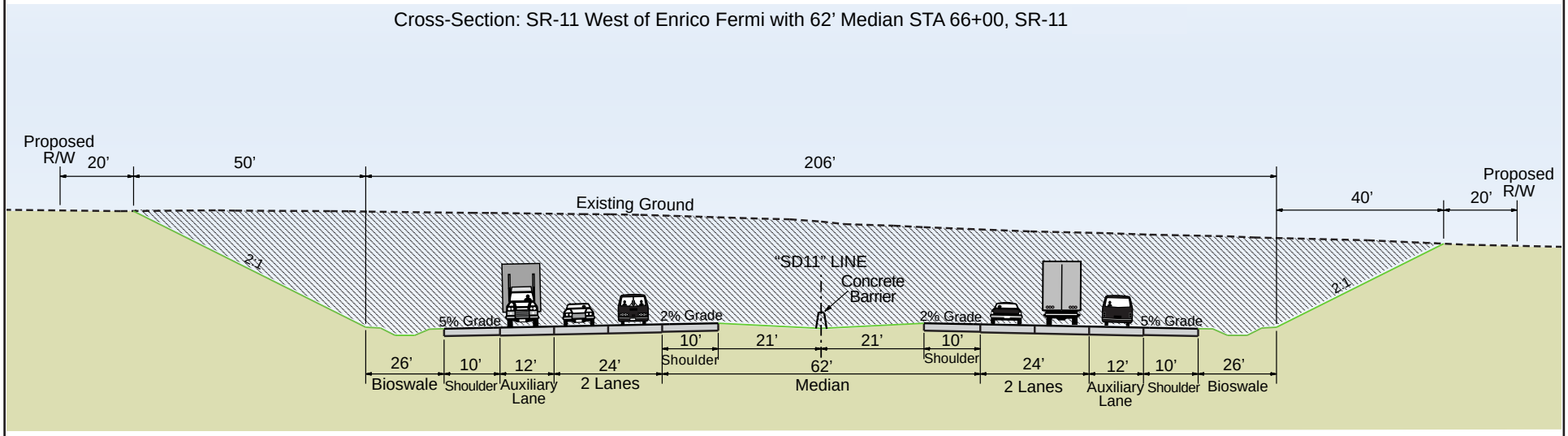



I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig2-4_CrossSection_OneNoInt_Sanyo.indd -JP

**Cross-Sections of SR-11 in the Sanyo Avenue Area: One and No Interchange Alternatives (with 22-foot Median) and 46-foot Median Variation**

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-4

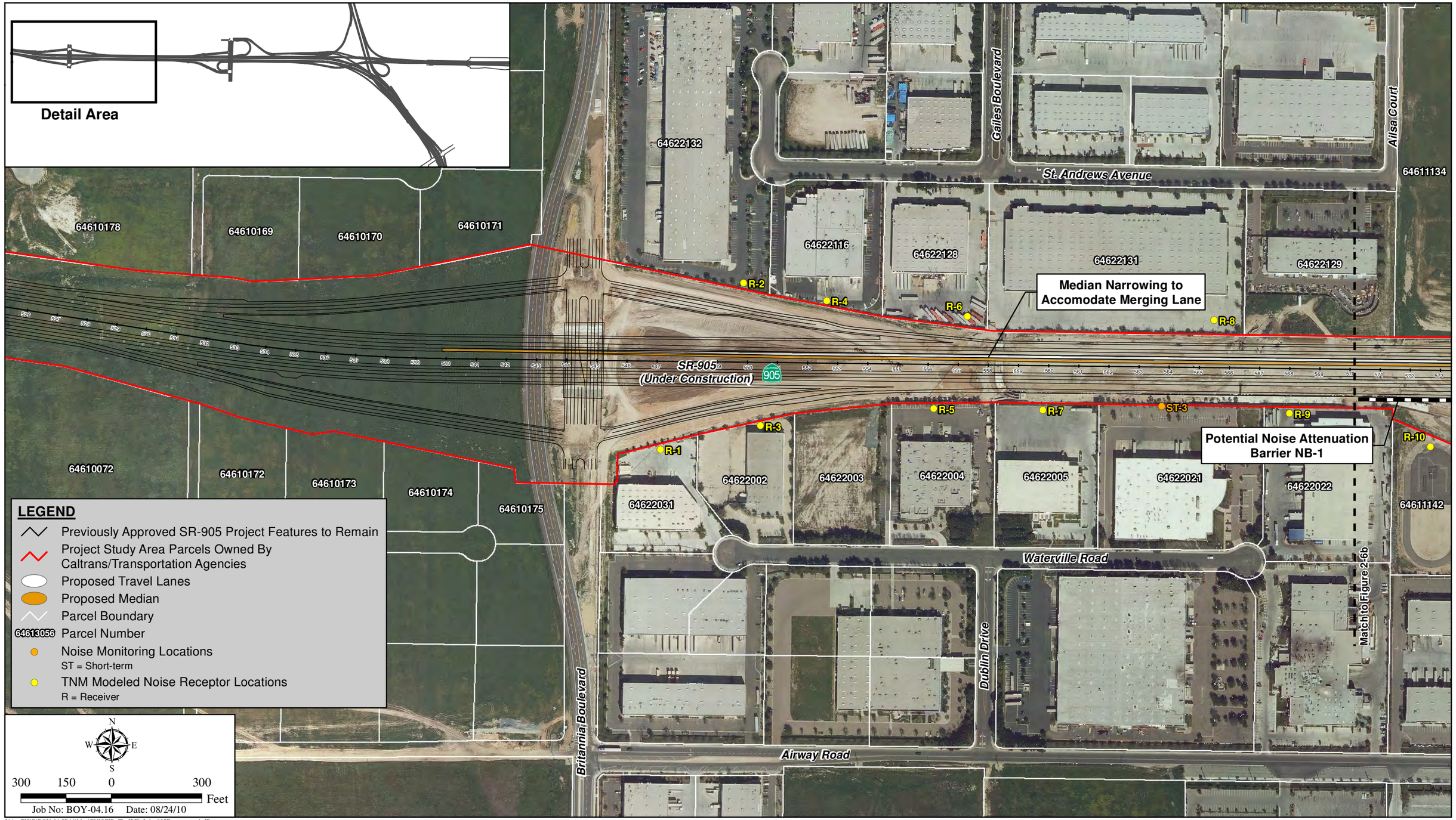



I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig2-5_CrossSection_Typical_SR11.indd -JP

# Typical Cross-Section of SR-11 with 62-foot Median (All Alternatives)

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-5

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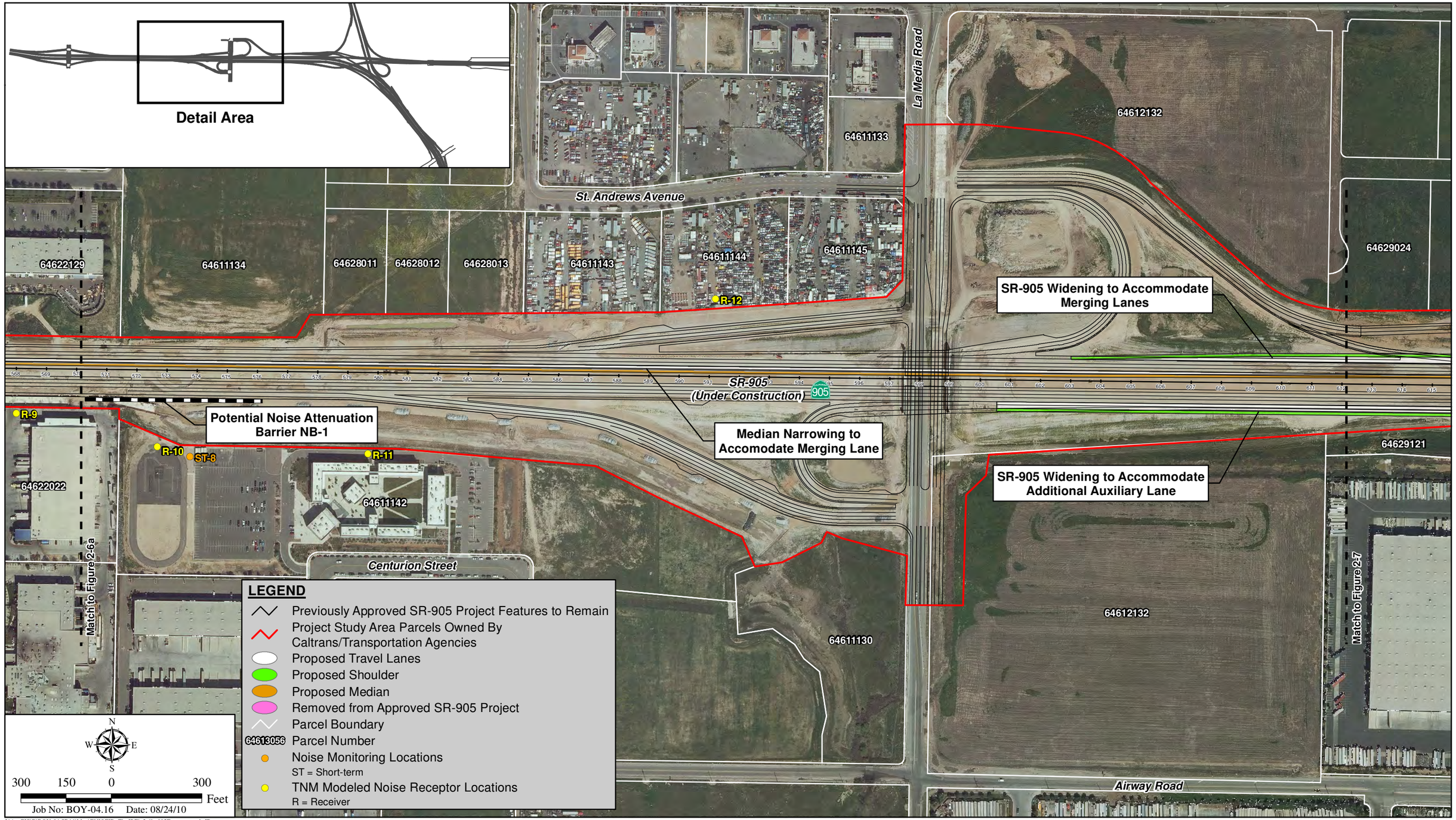
# Major Project Features West of SR-905/SR-125/SR-11 Interchange (All Alternatives)

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

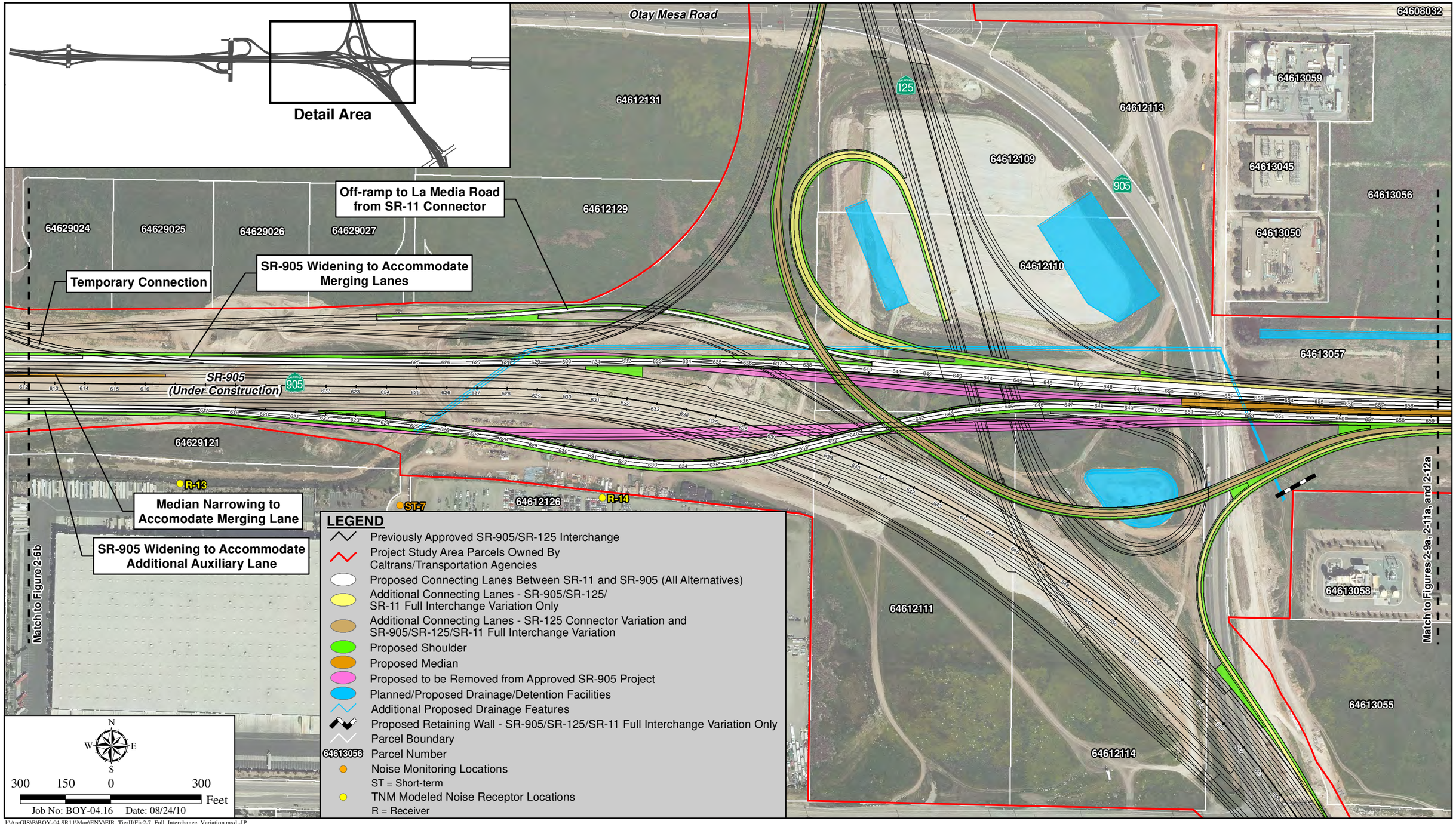
Figure 2-6a




# Major Project Features West of SR-905/SR-125/SR-11 Interchange (All Alternatives)

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-6b

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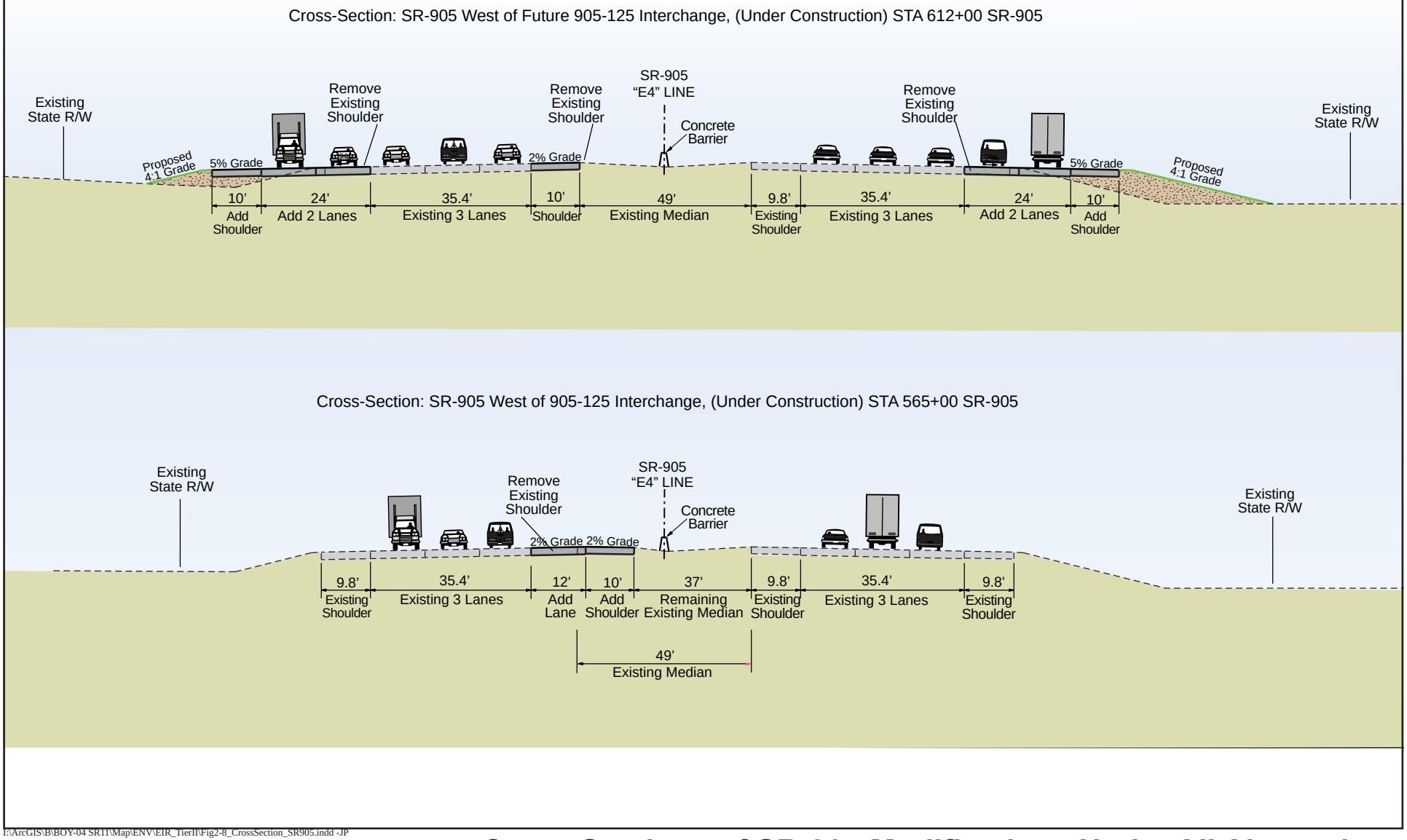
# SR-905/SR-125/SR-11 Interchange and Variations (All Alternatives)

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-7

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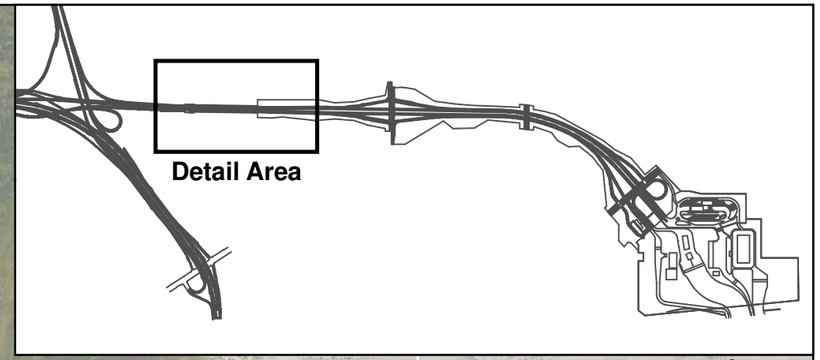
# Cross-Sections of SR-905 Modifications Under All Alternatives

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-8

**LEGEND**

- Proposed Right of Way
- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Retaining Wall and Edge of Pavement
- Proposed Edge of Grading
- Parcel Boundary
- 560 Grading Elevations
- Proposed Easement and Maximum Project Limits of Disturbance
- Proposed Shoulder
- Proposed Median
- Drainage Features
- Drainage Features
- Travel Lanes and Overcrossings
- F Fill Slope
- C Cut Slope
- 33 Station Number on Centerline
- 64613056 Parcel Number
- Noise Monitoring Locations
  - LT = Long-term
- TNM Modeled Noise Receptor Locations
  - R = Receiver




64613112
64613056
64613111
Carnoustie Road
Sanyo Avenue
Dornoch Court
64613103
64613106
64613110
64613039
64613040
64613104
64613105
64613109
Begin Retaining Wall
R-15
13' Easement
R-17
End Retaining Wall
LT-1
Detention Basin
End 22' Median Begin Median Taper Sta 54+00
R-16
Location of Cross-Section (See Figure 2-3)
22' Median
12' Easement
End Retaining Wall
Begin Retaining Wall
Existing SR-905 R/W
64613114
64613060
64613061
64613058
Match to Figure 2-7
Match to Figure 2-9b
64613117

N W E S
200 100 0 200 Feet
Job No: BOY-04.16 Date: 11/08/10

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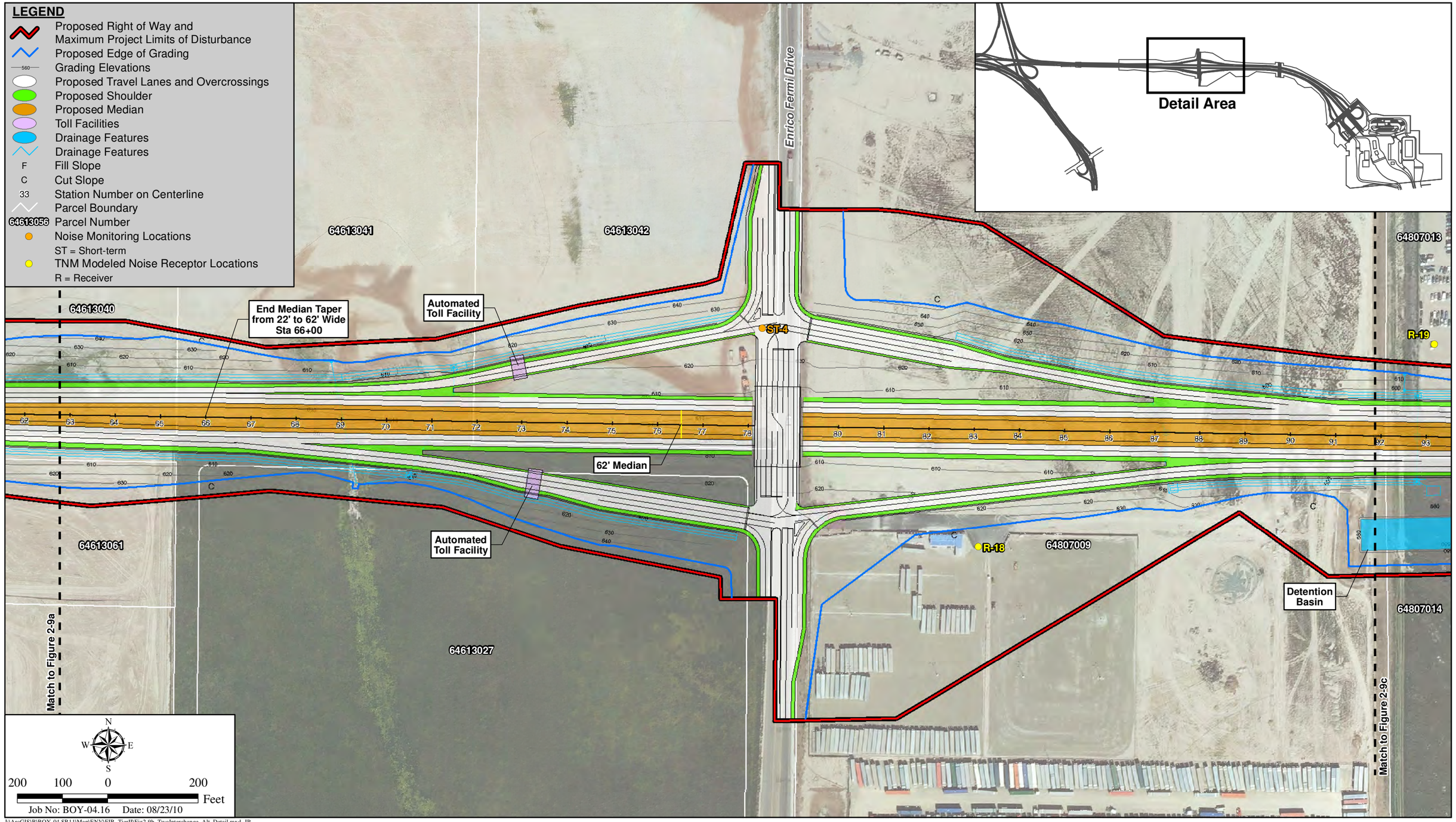
# Two Interchange Alternative - Major Project Features Sheet A

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-9a

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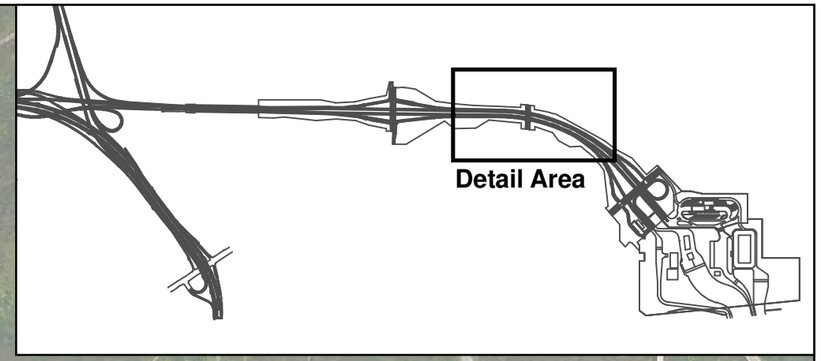
# Two Interchange Alternative - Major Project Features Sheet B

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-9b

**LEGEND**

- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Edge of Grading
- 560 Grading Elevations
- Proposed Travel Lanes and Overcrossings
- Proposed Shoulder
- Proposed Median
- Drainage Features
- Drainage Features
- F Fill Slope
- C Cut Slope
- 33 Station Number on Centerline
- Parcel Boundary
- 64613056 Parcel Number
- Noise Monitoring Locations
  - ST = Short-term
- TNM Modeled Noise Receptor Locations
  - R = Receiver




64807009
R-19
64807013
64807018
64807003
64807014
Alta Road
ST-5
Detention Basin
Detention Basin
Match to Figure 2-9b
Match to Figure 2-9d
F
C
N
W
E
S
200 100 0 200
Feet
Job No: BOY-04.16 Date: 08/23/10

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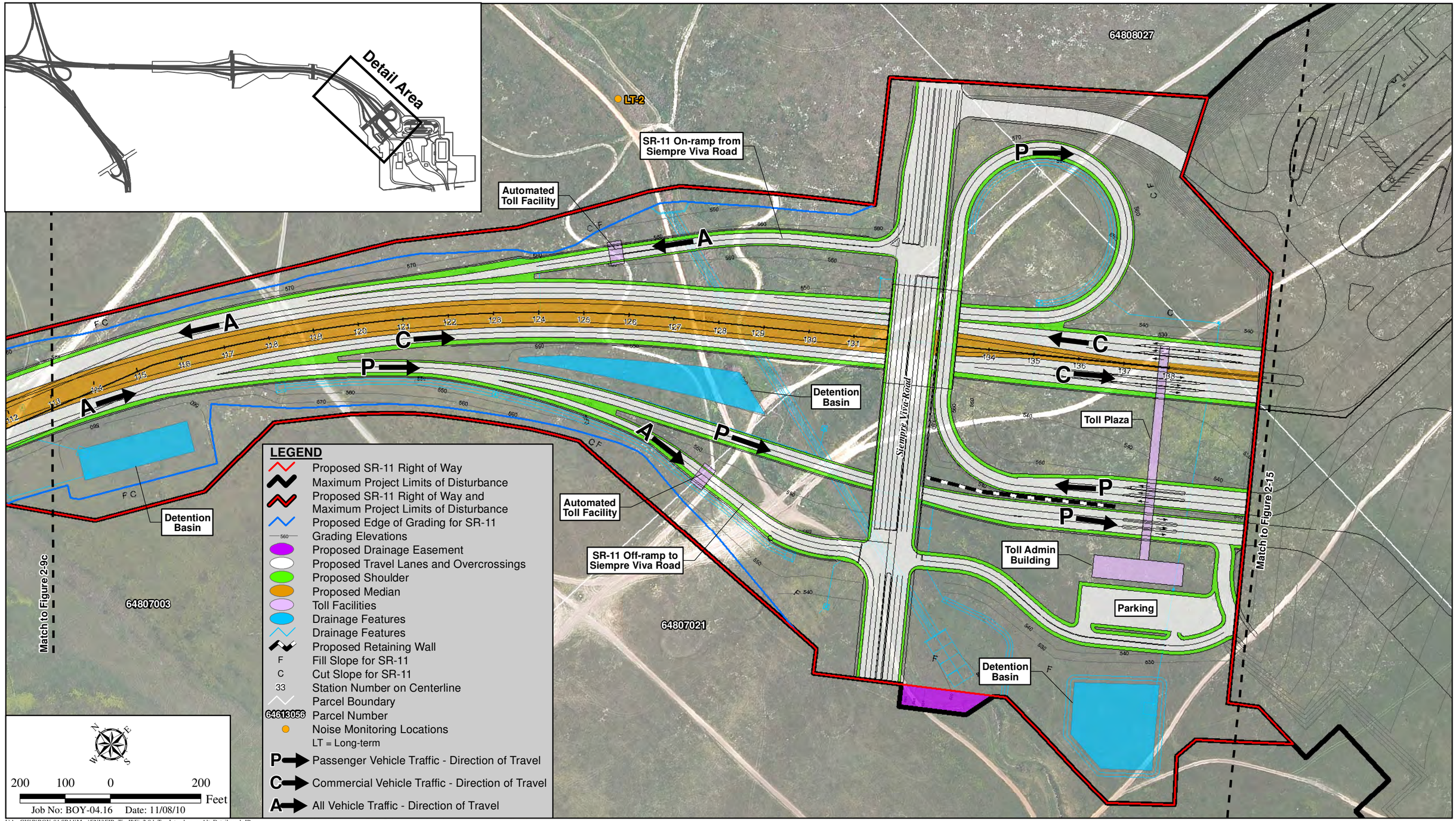
# Two Interchange Alternative - Major Project Features Sheet C

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-9c

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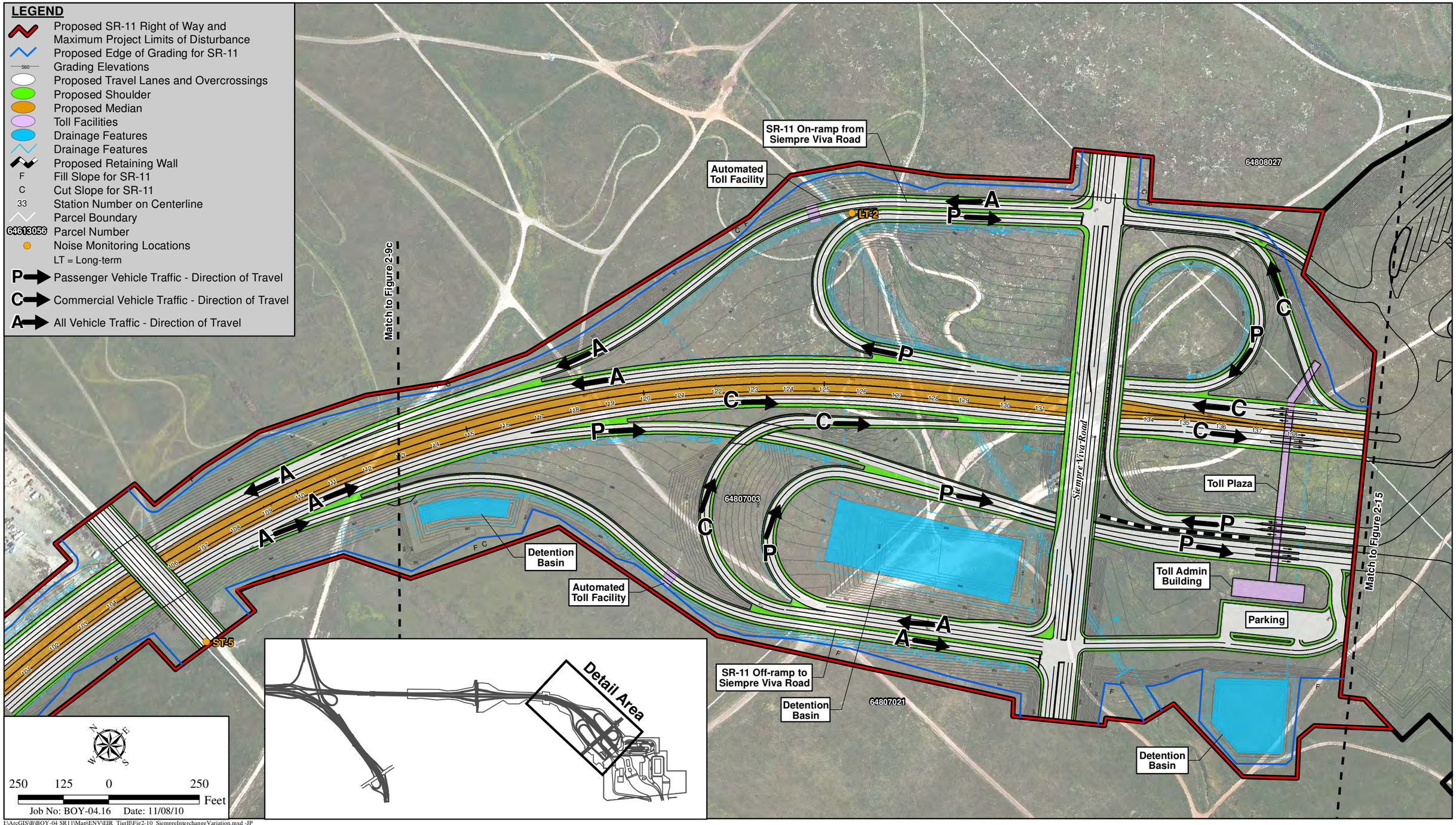
# Two Interchange Alternative - Major Project Features Sheet D

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-9d

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# Siempre Viva Road Full Interchange Variation

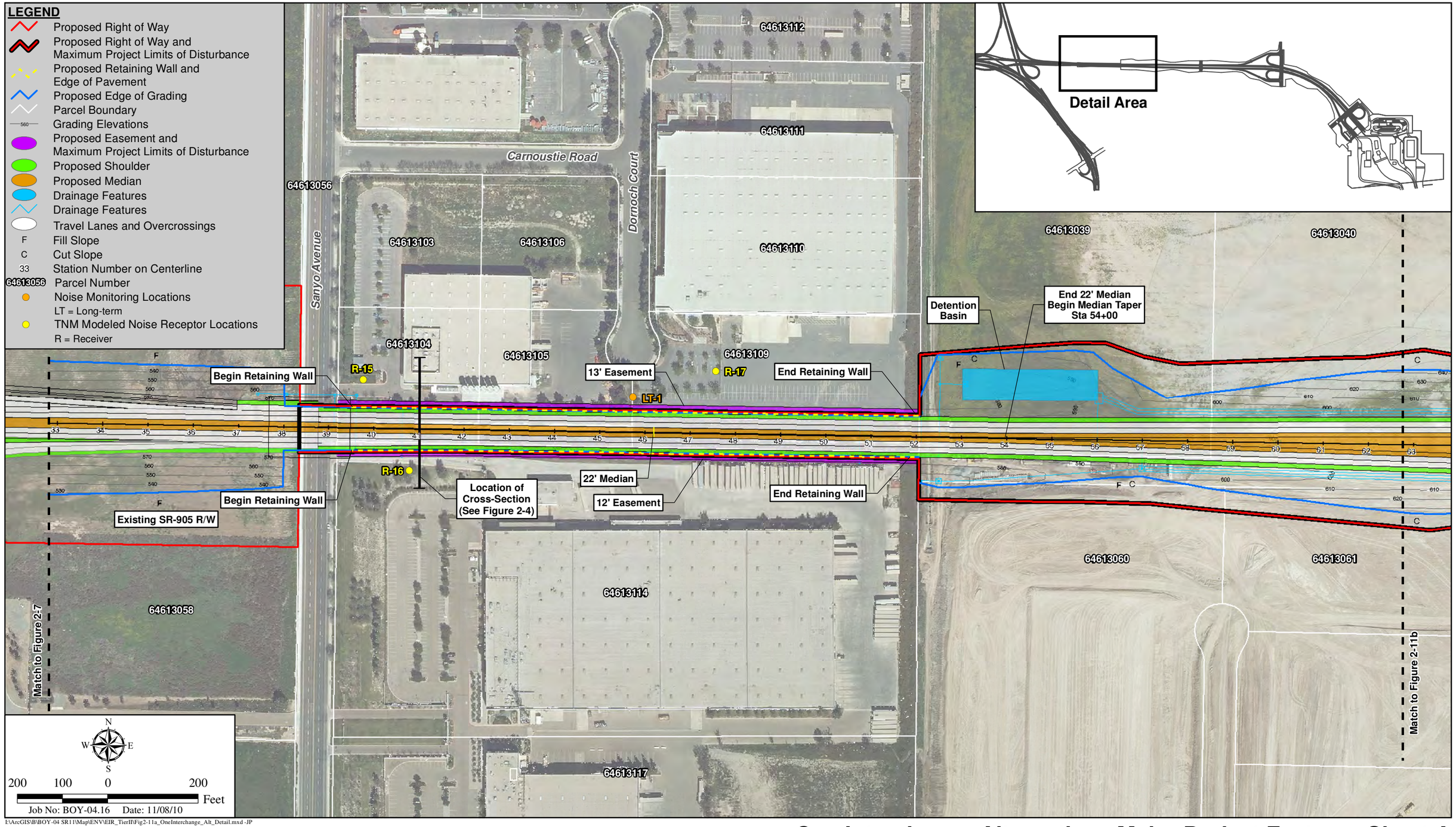
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-10

**LEGEND**

- Proposed Right of Way
- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Retaining Wall and Edge of Pavement
- Proposed Edge of Grading
- Parcel Boundary
- 560 Grading Elevations
- Proposed Easement and Maximum Project Limits of Disturbance
- Proposed Shoulder
- Proposed Median
- Drainage Features
- Drainage Features
- Travel Lanes and Overcrossings
- F Fill Slope
- C Cut Slope
- 33 Station Number on Centerline
- 64613056 Parcel Number
- Noise Monitoring Locations
  - LT = Long-term
- TNM Modeled Noise Receptor Locations
  - R = Receiver

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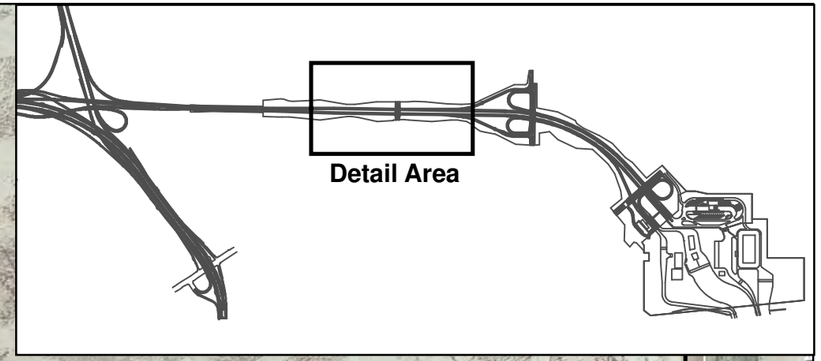
# One Interchange Alternative - Major Project Features Sheet A

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-11a

**LEGEND**

- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Edge of Grading
- 560 Grading Elevations
- Proposed Travel Lanes and Overcrossings
- Proposed Shoulder
- Proposed Median
- Drainage Features
- Drainage Features
- F Fill Slope
- C Cut Slope
- 33 Station Number on Centerline
- Parcel Boundary
- 64613056 Parcel Number
- Noise Monitoring Locations
  - ST = Short-term
- TNM Modeled Noise Receptor Locations
  - R = Receiver




Enrico Fermi Drive

64613041
64613042
64807013
64807009
64613040
64613061
64613027
64807014

End Median Taper from 22' to 62' Wide Sta 66+00

62' Median

ST-4
R-19
R-18

Match to Figure 2-11a
Match to Figure 2-11c

N W E S

200 100 0 200 Feet

Job No: BOY-04.16 Date: 08/23/10

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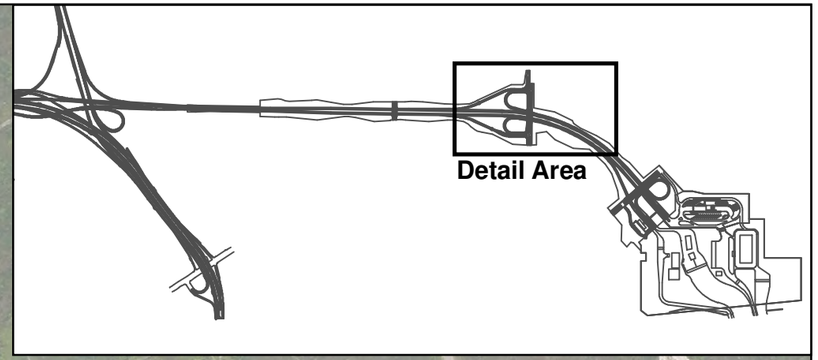
# One Interchange Alternative - Major Project Features Sheet B

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-11b

**LEGEND**

- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Edge of Grading
- 560 Grading Elevations
- Proposed Travel Lanes and Overcrossings
- Proposed Shoulder
- Proposed Median
- Toll Facilities
- Drainage Features
- Drainage Features
- F Fill Slope
- C Cut Slope
- 33 Station Number on Centerline
- Parcel Boundary
- 64613056 Parcel Number
- Noise Monitoring Locations
  - ST = Short-term
- TNM Modeled Noise Receptor Locations
  - R = Receiver




64807018
64807013
64807009
64807003
64807014
Alta Road
Automated Toll Facility
R-19
Detention Basin
Automated Toll Facility
ST-5
Detention Basin
Match to Figure 2-11b
Match to Figure 2-11d
N
W
E
S
200 100 0 200 Feet
Job No: BOY-04.16 Date: 08/23/10

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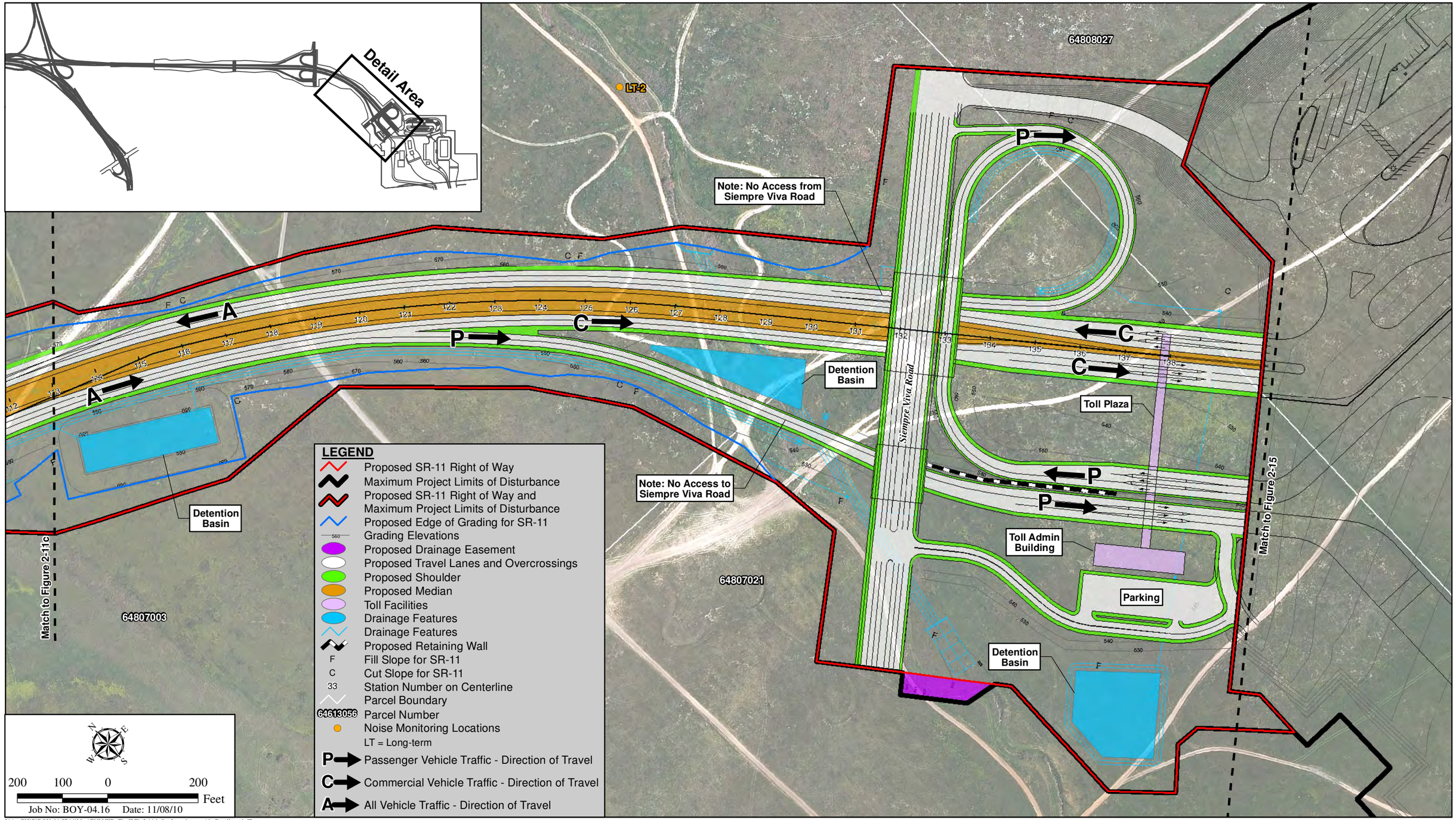
# One Interchange Alternative - Major Project Features Sheet C

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-11c

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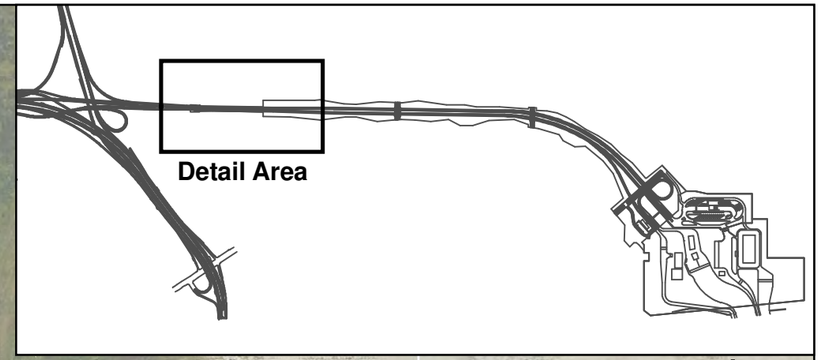
# One Interchange Alternative - Detail Sheet D

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-11d

**LEGEND**

- Proposed Right of Way
- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Retaining Wall and Edge of Pavement
- Proposed Edge of Grading
- Parcel Boundary
- 560 — Grading Elevations
- Proposed Easement and Maximum Project Limits of Disturbance
- Proposed Shoulder
- Proposed Median
- Drainage Features
- Drainage Features
- Travel Lanes and Overcrossings
- F — Fill Slope
- C — Cut Slope
- 33 — Station Number on Centerline
- 64613056 — Parcel Number
- Noise Monitoring Locations
  - LT = Long-term
- TNM Modeled Noise Receptor Locations
  - R = Receiver




64613112
64613111
64613056
64613103
64613106
64613110
64613039
64613040
Sanyo Avenue
64613104
64613105
64613109
Detention Basin
End 22' Median Begin Median Taper Sta 54+00
Begin Retaining Wall
R-15
13' Easement
R-17
End Retaining Wall
LT-1
R-16
22' Median
12' Easement
Location of Cross-Section (See Figure 2-4)
End Retaining Wall
F Begin Retaining Wall
Existing SR-905 R/W
64613058
64613114
64613060
64613061
Match to Figure 2-7
Match to Figure 2-12b
64613117

N W E S

200 100 0 200 Feet

Job No: BOY-04.16 Date: 11/08/10

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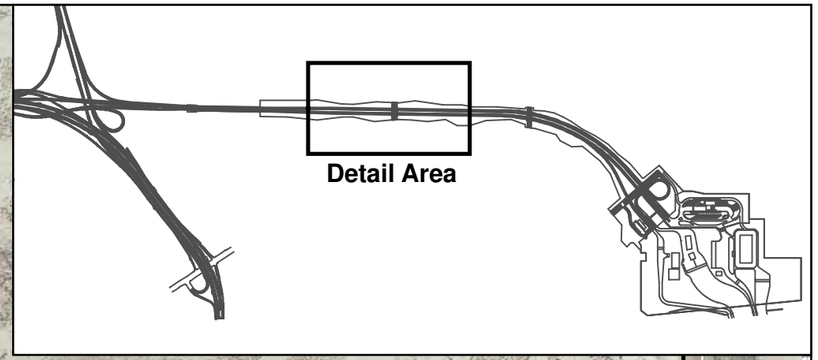
# No Interchange Alternative - Major Project Features Sheet A

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-12a

**LEGEND**

- Proposed Right of Way and Maximum Project Limits of Disturbance
- Proposed Edge of Grading
- 560 Grading Elevations
- Proposed Travel Lanes and Overcrossings
- Proposed Shoulder
- Proposed Median
- Drainage Features
- Drainage Features
- F Fill Slope
- C Cut Slope
- 33 Station Number on Centerline
- Parcel Boundary
- 64613056 Parcel Number
- Noise Monitoring Locations
  ST = Short-term
- TNM Modeled Noise Receptor Locations
  R = Receiver




64613041
64613042
64807013
64807009
64613040
64613061
64613027
64807014
Enrico Fermi Drive
End Median Taper from 22' to 62' Wide Sta 66+00
62' Median
ST-4
R-19
R-18
Detention Basin
Match to Figure 2-12a
Match to Figure 2-12c

N W E S

200 100 0 200 Feet

Job No: BOY-04.16 Date: 08/23/10

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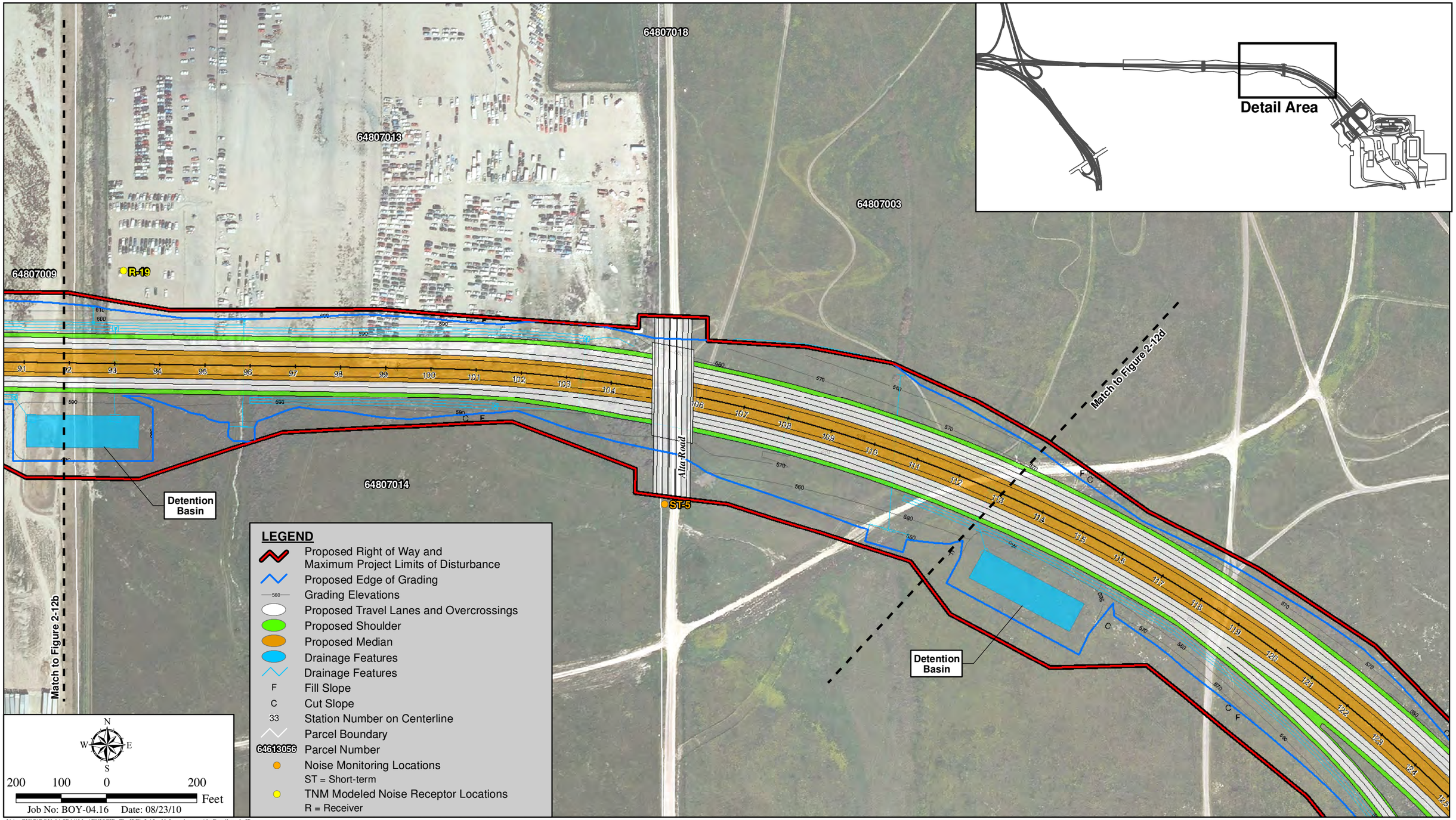
# No Interchange Alternative - Major Project Features Sheet B

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-12b

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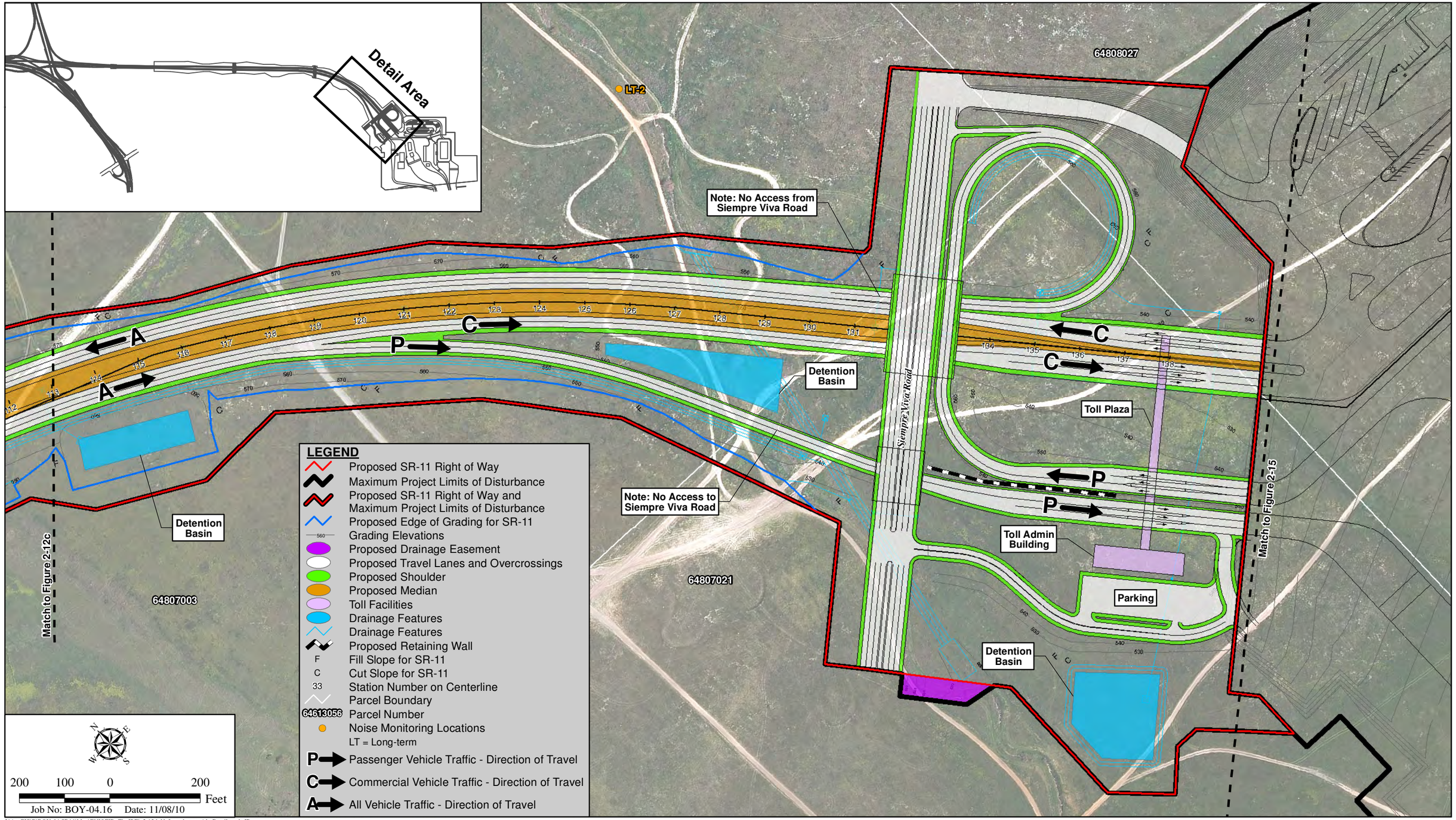
# No Interchange Alternative - Major Project Features Sheet C

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-12c

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# No Interchange Alternative - Major Project Features Sheet D

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-12d



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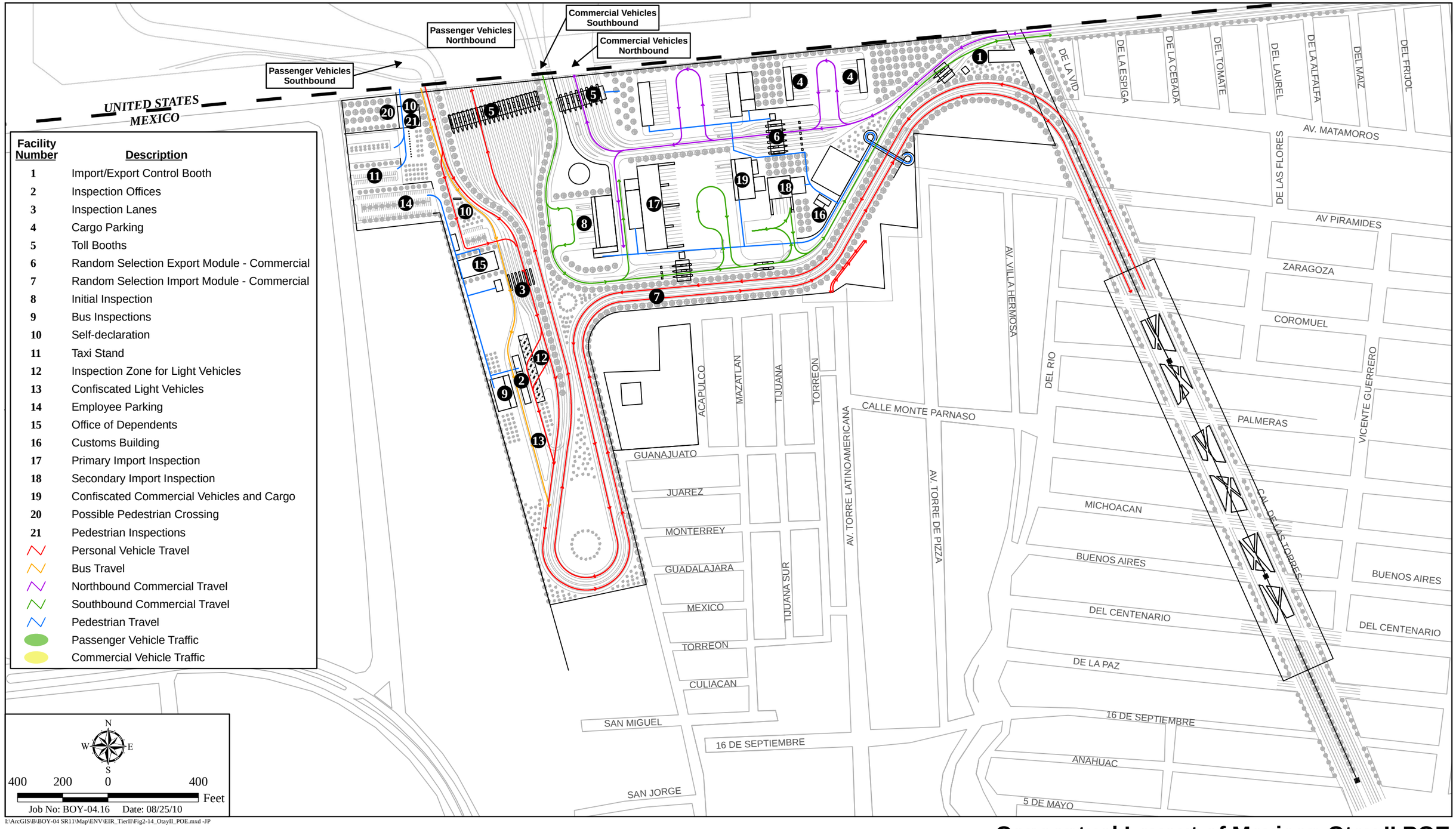
# Typical Electronic Toll Collection Facilities

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-13




# Conceptual Layout of Mexican Otay II POE

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-14

**LEGEND**

| Facility Number | Description |
|---|---|
| | **Northbound (Inbound/Import) Commercial Facilities** |
| 1 | Commercial Primary Inspection Booth/Canopies |
| 2 | Commercial VACIS Lanes (Building) |
| 3 | Commercial Bulk Storage Inspection Bins |
| 4 | Bird Quarantine Building |
| 5 | Commercial Inspection Building |
| 6 | Commercial Inspection Docks |
| | **Southbound (Outbound/Export) Commercial Facilities** |
| 7 | Commercial Primary Inspection Booth/Canopies |
| 8 | Commercial Inspection Building/Docks |
| 9 | Commercial Exit Lanes/Booth/Canopies |
| 10 | Seizure Vault |
| | **Northbound (Inbound) Non-commercial Facilities** |
| 11 | Non-commercial Primary Inspection Booth/Canopies |
| 12 | Non-commercial Primary Headhouse |
| 13 | Non-commercial Secondary Inspection Lanes/Booths/Canopy |
| | **Southbound (Outbound) Non-commercial Facilities** |
| 14 | Non-commercial Primary Inspection Canopy |
| 15 | Non-commercial and Commercial Inspection Building |
| | **Other Non-commercial Facilities** |
| 16 | Main Building |
| 17 | Bus Offload Spaces (10 by 60 feet each, Non-building) |
| 18 | Bus Plaza Canopy |
| 19 | Bus Inspection Space (12 by 60 feet, Non-building) |
| | **Parking Facilities** |
| 20 | General Parking Lot (Non-building) |
| 21 | Commercial Truck Impound Lot (1,750 sf/space, Non-building) |
| | **CVEF Facilities** |
| 22 | Administration Building |
| 23 | Inspection Bays |
| 24 | Smog Inspection |
| 25 | Weight Scales |

- Northbound Travel
- Southbound Travel
- Passenger Vehicle Traffic
- Commercial Vehicle Traffic
- Existing 24-inch Fuel Line
- Proposed 24-inch Fuel Line Relocation within 20-foot Easement
- 520 Grading Elevations
- Drainage Features
- Drainage Features
- Storm Drain With Inlets (▪) and Outlets (□)
- Proposed SR-11 Right of Way
- Additional Disturbance Limits within U.S. Border Patrol Easement
- Parcel Boundary
- CVEF Boundary
- POE Boundary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# Conceptual Otay Mesa East POE and CVEF Layout

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 2-15


# Chapter 3

# Affected Environment; Environmental Consequences; and Avoidance, Minimization and/or Mitigation Measures

# CHAPTER 3.0 – AFFECTED ENVIRONMENT; ENVIRONMENTAL CONSEQUENCES; AND AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

A series of technical studies was prepared to support this EIR/EIS. These technical studies are available for review at Caltrans District 11 offices at 4050 Taylor Street, Building 1 – Main Lobby, San Diego, CA 92110, and at the Imperial Beach, Bonita-Sunnyside and Otay Mesa-Nestor branches of the San Diego County Library. Appendix C contains a list of all technical studies supporting this EIR/EIS.

As part of the Tier II scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

U.S. Department of Transportation - Section 4(f) Resources: Section 4(f) of the DOT Act of 1996 declares that "[it] is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." An analysis was undertaken to determine whether the project has potential to pose impacts to Section 4(f) resources and is contained in Appendix D to this EIR/EIS. In Appendix D, the fitness track at the Southwestern College Higher Education Center was evaluated for potential effects to a Section 4(f) resource. It was determined that, because the track is available only for student/team use and not open to the public, it does not qualify for protection under Section 4(f). Because the proposed project would not impact publicly owned land of a public park, recreation area or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance, no further Section 4(f) evaluation is necessary (Caltrans 2007b).

Farmland: The majority of the study area was no longer used for agriculture by the early 1980s, with all agricultural use terminated by 1990. There are no Williamson Act contract lands within the study area. For projects where farmland may be affected, the Natural Resources Conservation Service (NRCS) requires the completion of the appropriate Farmland Conversion Impact Rating Form, based on the underlying soil profile, regardless of surface development (i.e., even in developed areas). A Farmland Conversion Impact Rating assessment (Form 106) was submitted to the NRCS on July 30, 2010. A reply was received from the NRCS, dated September 3, 2010, and the information received is reflected in Appendix E. Part VII of the project Form 106 (which is completed by the NRCS) indicates the Two Interchange Alternative (Corridor A) would have 69.2 total points, the One Interchange Alternative (Corridor B) would have 69.4 total points, and the No Interchange Alternative (Corridor C) would have 69.6 points out of a possible 260 points. Considering that the NRCS threshold score is 160 points, farmland impacts would not be substantial.

Timberlands: The project site is not located within a Timber Production Zone. Implementation of the Project would not substantially affect timberlands.

Wild and Scenic Rivers/Coastal Zone Areas: The project site is neither located near wild and scenic rivers nor within a coastal zone area.

Parks and Recreational Services: All parks and recreational facilities are located at least one mile from the proposed project and would therefore not be impacted. The proposed project would not impact a publicly-owned, Section 4(f) park, preserve or recreational facility under any of the project alternatives or variations. The project also would not generate an increase in demand for parks or recreational facilities.

# HUMAN ENVIRONMENT

## 3.1 EXISTING AND FUTURE LAND USE

This section of the EIR/EIS assesses the potential for existing land use patterns and development trends within the study area to affect, or be affected by, implementation of the proposed project. A Community Impact Assessment (CIA; HELIX/CIC Research 2010) was completed for the proposed project. The CIA analyzes characteristics of existing and future land use and community characteristics and is the basis of the information presented in this section, as well as in Sections 3.2, *Consistency with Federal, State, Regional and Local Plans and Programs*; 3.3, *Growth*; 3.4, *Community Character and Cohesion*; 3.5, *Relocations and Real Property Acquisition;* and 3.6, *Environmental Justice*.

The land use study area evaluated in the CIA and in this EIR/EIS extends from just north of Otay Mesa Road south to the U.S. - Mexico international border; and from just east of the Sempra Energy easement, near the base of the San Ysidro Mountains, to just west of Britannia Boulevard along SR-905. The land use study area is depicted in Figure 3.1-1, *Existing Land Uses in the Land Use Study Area*. SANDAG is the regional growth management agency for the San Diego area and is responsible for preparing demographic and economic statistics and regional growth forecasts. SANDAG's statistics are available at the subregional and census tract level, as well as for zip codes and community planning areas. The San Diego region is divided into seven Major Statistical Areas (MSAs), which are further subdivided into Subregional Areas (SRAs). The land use study area is located within the South Suburban MSA, SRA 22, near the boundary of the East Suburban MSA and SRA 30. More specifically, the project site is located in the southeast section of CT 100.15, which lies partially in the City, and partially in the County.

Unless otherwise indicated, references in this EIR/EIS to "the POE site," "the POE footprint" or "the POE limits of disturbance" are intended to include the proposed CVEF and sufficient space for a potential future transit center.

### 3.1.1 Affected Environment

#### Land Use Designations and Zoning

Approximately half of the proposed project area is located within the jurisdiction of the County. More specifically, the entirety of the proposed POE and CVEF sites and most of proposed SR-11 (except its connectors and associated modifications to SR-905) are located within the EOMSP area, which extends northerly to Johnson and O'Neill canyons and easterly to the base of the San Ysidro Mountains. The westernmost portion of proposed SR-11, including the business park fronting on Sanyo Avenue, its connectors, and associated modifications to SR-905 are within the City of San Diego's OMCP area.

County of San Diego

The County portions of the project would be located in Subareas 1 and 2 of the EOMSP Area. EOMSP land use designations were developed with the expectation that SR-11 and the POE would be implemented to support the anticipated growth in the area, and are consistent with the goals and policies of the Regional Land Use Element and Otay Subregional Plan of the County's General Plan. SR-11 and the Otay Mesa East POE are identified on the EOMSP and County Circulation Plans in the approximate locations of the corridor that was selected in Phase I for the project.

The western portion of SR-11 that would fall within the County is within Subarea 1 and passes through land designated Technology Business Park and Light Industrial. The Technology Business Park designation is intended for development of manufacturing operations and business offices that research, develop and produce advanced technologies. The Light Industrial designation accommodates all uses permitted in the Technology Business Park plus wholesale storage and distribution.

To the east, the portions of the project in Subarea 2 pass through land designated Mixed Industrial, which is intended primarily to accommodate wholesale storage and distribution, research services, and general industrial uses, as well as compatible commercial uses. All of these land designations permit civic uses. The "B" Designator overlay also applies to the County portions of the land use study area; this requires the implementation of specific development and design regulations in conjunction with development.

The POE and CVEF sites and the County portions of SR-11 are zoned S88, Specific Plan Use Regulations under the County Zoning Ordinance. The S88 zoning is intended to accommodate any land uses designated in the applicable Specific Plan. As noted, in the case of the POE and CVEF sites and the County portions of SR-11, such uses include the Technology Business Park and Light Industrial designation in Subarea 1 (western portion of the EOMSP) and the Mixed Industrial land use designation in Subarea 2 (eastern portion).

City of San Diego

SR-11 is also a planned facility in the City's OMCP. Proposed SR-11, its connectors to SR-905, and proposed SR-905 modifications to accommodate these connectors, are surrounded by a land use designation of Industrial Parks/Light Industry in the Land Use Element of the City's currently adopted OMCP. The zoning designation surrounding this portion of the project is OMDD-INDUST-SUBD (Otay Mesa Development District: Industrial Subdistrict) under the City's Land Development Code. Properties fronting the future SR-905 from just west of Britannia Boulevard to the SR-125 interchange have similar land use and zoning designations, except for the land surrounding the future SR-905/La Media Road Interchange, which is designated Specialized Commercial. This area is zoned OMDD-COMMERCL-SUBD (Otay Mesa Development District Commercial Subdistrict).

**Existing and Future Land Uses**

Field investigations of the land use study area were conducted on June 5, August 25, September 25, 2009, and January 12, 2010. The field investigations confirmed specific land uses and potential impacts based on preliminary maps of the land use study area. The field reviews also included observations of traffic flow, speed, congestion, and access. Digital photographs were taken to document the land use study area and are contained in the CIA.

Surrounding Land Uses

The proposed project is primarily surrounded by undeveloped land, as shown in Figure 3.1-1. Two vehicle/container storage lots and a vehicle auction yard are located in the southern part of the land use study area near Enrico Fermi Drive, along with the Otay Mesa CVEF operated by the CHP in cooperation with the existing Otay Mesa POE. Additional vehicle-related businesses are located just southwest of the SR-905/SR-125/SR-11 Interchange and just west of the SR-905/La Media Road Interchange. Existing industrial uses within the land use study area are located west of Enrico Fermi Drive. These include industrial buildings to the east of SR-905, and vehicle storage and industrial buildings between La Media Road and Britannia Boulevard. Several peaker power plants are located east of the SR-905/SR-125/ SR-11 Interchange. Two small commercial zones developed primarily with hotel, motel, and restaurant

uses are also located along SR-905 near the existing Otay Mesa POE; other commercial zones are located just northwest of the SR-905/SR-125/SR-11 Interchange and just northwest of the SR-905/La Media Road Interchange. A satellite campus of Southwestern College is located southeast of the SR-905/Britannia Boulevard Interchange. The only residential uses in the vicinity are three single-family residences grouped together on the north side of Otay Mesa Road between SR-905 and Alta Road. Another house is located just beyond the land use study area, approximately 0.4 mile west of the terminus of the project modifications to SR-905 at Britannia Boulevard. Several other single-family residences are located one or more miles from the proposed project in areas to the north, south and west (beyond the limits of the land use study area). A privately owned wetland preserve is located south of SR-905 and west of La Media Road. There are currently no plans or requirements for this preserve to be placed in public ownership.

Beyond the land use study area, open space lands are located to the east and northeast of the project. To the north are open space, industrial uses, the Brown Field Airport, and several correctional facilities. To the south are industrial, commercial and government uses, some of which are associated with SR-905 and the existing Otay Mesa POE. West of this developed area toward I-805/I-5 and the San Ysidro POE is a mix of land uses including residential, commercial, industrial, and open space.

Undeveloped Land

Of the 2,524 acres in the land use study area, 1,677 (67 percent) are undeveloped (including the SR-905/SR-125 R/W), while 847 acres (32 percent) are developed. Portions of the undeveloped land have been graded in preparation for development.

Development Trends

Land on both sides of the border in the Otay Mesa area is rapidly urbanizing. On the U.S. side, employment in the census tract surrounding the land use study area is projected to increase from 341 to 28,109 during the period from 2000 to 2030, an 81-fold increase, while a 19-fold population increase is projected during the same time period (CIC Research 2009). It is noted that current industrial market conditions are weak throughout San Diego County and for the nation, having been substantially impacted by the recent economic recession. The lingering high national unemployment rate is one measure of the slow U.S. economic recovery. A return to economic growth for the nation and for the local region's economy is a necessary condition for improved industrial land and industrial space market demand within the Otay Mesa submarket.

Long term population and employment projections (2010 – 2030) for the County, and the southern portion of the County specifically, support both the absorption and strong market demand for the available industrial land in Otay Mesa. The County has a limited supply of vacant industrial-zoned land that could accommodate large-scale warehousing and manufacturing facilities. The development of the proposed POE would enhance demand for the available large industrial parcels in Otay Mesa.
The County most recently updated the EOMSP in April 2009 (County 2009a). Both the County and the City have several active development applications within and adjacent to the land use study area. The EOMSP identifies a conceptual SR-11 Corridor and POE site approximating the Western Alternative selected in the Phase I PEIR/PEIS process, although the identified conceptual POE site is smaller than the POE site proposed as part of this project (approximately 22 acres compared to 106.3 acres).

Development pressures are also occurring in the areas of northeastern Tijuana near the proposed POE, where potential undeveloped sites for the Otay II POE on the Mexico side of the border have all but disappeared due to industrial development and increasing encroachment by low income, high density,

unregulated residential settlements. Accordingly, Mexican transportation and land use agencies at the state and local levels have reserved a 91-acre site for the Otay II POE (refer to Figure 1-2) that corresponds closely to the proposed Otay Mesa East POE in the U.S. Concurrently, these agencies initiated studies of potential alternative links between the Otay II POE and Baja California regional transportation network. Under Mexican laws, however, the reservation that has been placed on the POE site must be released by May 2011 if it is not purchased for use as a POE by that time. This situation contributes to the urgency in developing SR-11 and the Otay Mesa East POE on the U.S. side of the border.

Figure 3.1-2, *Planned Land Uses in the San Diego/Tijuana Border Region*, depicts the land use designations in the border region on both the U.S. and Mexican sides. Table 3.1-1 presents the current proposed private development projects in the project vicinity. The SR-11 and POE/CVEF alternatives would traverse the following proposed project sites described in Table 3.1-1: Otay Crossings Commerce Park, Otay Business Park (Paragon), Bradley/Robertson Copart Salvage Auto Auctions, Otay Mesa Travel Plaza, Dillard and Judd Roll County LLC/Enrico Fermi Industrial Park, and Saeed TM/Airway Business Center.

In addition to the proposed development projects listed in Table 3.1-1, a number of public projects are in process in the project vicinity and are listed in Table 3.1-2. These include capital improvement projects undertaken by the County, the City and the OWD, construction by Caltrans of SR-905 and SR-125, and improvements to the existing San Ysidro and Otay Mesa POEs.

**Table 3.1-1**
**CHARACTERISTICS OF PROPOSED LAND DEVELOPMENT PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Identifying Project Number/ Project Name | Location | Proposed Improvements (Project Acreage) | Project Status |
|---|---|---|---|---|
| | | | **County of San Diego** | |
| 1 | TM 5405/SPA 04-006 MUP 00-024/ *Otay Crossings Commerce Park* | South of Otay Mesa Road and east of Alta Road | Subdivision into 62 industrial lots ranging from 1.3 to 69.6 net acres each (total lot area: 287 acres). Also, 26.6 acres of public streets. Open space easements on five lots in the northeast corners of site to protect steep slopes and biologically sensitive resources. Two-phase development. Future R/W for SR-11 and new POE tentatively mapped on four lots, covering approximately 102.7 acres. (311.6 acres) | February 9, 2006 County scoping letter required preparation of a supplemental EIR due to changes since the EOMSP EIR (July 27, 1994). Significant and unmitigable cumulative impacts identified for traffic and air quality. Significant and mitigable direct impacts identified for biological resources, cultural resources, traffic, and noise. Sixth Screencheck Draft Supplemental EIR circulated for public review May 27, 2010.. |
| 2 | TM 5538/TM 5139/MUP 98-020 STP 02-05139-1/ SPA 07-003 *Sunroad Centrum Tech Center* | Northeast of Otay Mesa Road and Otay Mesa Road/SR-905 | Subdivision into 63 lots ranging in size from 1.4 acres to 5.1 acres, of which 11.5 acres are dedicated to commercial uses (SPA). (289.5 acres) | Final Supplemental EIR to the EOMSP Final EIR dated December 15, 2000 for 96-lot project (TM 5139). EIR addendum dated March 4, 2003 for 56-lot project included changes to road improvements and grading. TM 5139 expired; TM 5538 currently proposed on same site (plus triangular area just west of original site, adjacent to SR-125). Supplemental EIR for TM 5139 identified significant unmitigable impacts for air quality and transportation; significant and mitigable impacts identified for biological and cultural resources. Mitigation required open space to protect vernal pools, NNG and sensitive species, cultural and bio monitors, off-site purchase of 0.4 acre of southern willow scrub wetland, 5.4 acres native grassland, 48.6 acres of NNG, avoidance of raptor nesting, and obtaining a QCB take permit. Other requirements include traffic improvements and construction conditions to prevent air quality impacts; however, cumulative air quality impacts and short-term construction traffic impacts would remain unmitigable. |
| 3 | TM 5304/Saeed TM/ Airway Business Center | North side of Airway Dr. between Paseo de las Americas and Michael Faraday Dr. | Subdivision into 18 lots (0.75 acre to 3.07 acres) for light industrial uses. (40.59 acres) | Project approved April 21, 2008. Scoping letter dated April 8, 2003 indicated potentially significant impacts to biology, paleontology, archaeology, geology, traffic, and drainage issues. April 2, 2004 biological survey identified impacts to 38.52 acres of NNG, to be mitigated by purchase of 19.26 acres of mitigation bank habitat. Only sensitive species are foraging raptors. |

**Table 3.1-1 (cont.)**
**CHARACTERISTICS OF PROPOSED LAND DEVELOPMENT PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Identifying Project Number/ Project Name | Location | Proposed Improvements (Project Acreage) | Project Status |
|---|---|---|---|---|
| **County of San Diego (cont.)** | | | | |
| 4 | TM 5394/ *Dillard and Judd Roll County LLC/ Enrico Fermi Industrial Park/ South County Commerce Center* | Southwest corner of Enrico Fermi Drive and Otay Mesa Road/SR 905 | Subdivision into 16 industrial lots ranging from 2.25 to 8.20 acres each. (80 total acres) | FEIR dated January 2006, certified March 10, 2006. Minor Amendment to the MSCP, consistent with BMO, within the boundary of the adopted HCP. Impacts concluded as less than significant. Project completed September 9, 2008. |
| 5 | MUP 04-004 RP 04-001/ *Otay Hills Construction Aggregate Extraction Operation* | Approximately 0.5 mile east of the intersection of Otay Mesa Road and Alta Road | Rock Quarry located on 210 acres in 550 acre-ownership. Construction aggregate extraction operation, including materials processing (primary and secondary plants), concrete batch plant, cement-treated base plant, asphalt batch plant, and recycling of asphalt and concrete products. (210 acres) | NOP dated May 26, 2005 included Initial Study identifying potential impacts to land use, geology, hydrology/water quality, biological and cultural resources, traffic, noise, air quality, public services/utilities, hazardous materials, and aesthetics. Draft EIR submitted April 2007. First Iteration Review of the Screencheck Draft EIR dated September 6, 2007. March 3, 2009 Follow-up letter from February 13, 2009 meeting stated that current negotiations were underway to revise the project footprint. |
| 6 | TPM 20701RPL1/ ZAP 99-029/STP 05-018 SPA 05-005/ *Burke Minor Subdivision/Otay Logistics Center* | Eastern side of Enrico Fermi Drive between Siempre Viva Road and Airway Road | Subdivision into four parcels of 8.80, 9.37, 9.48, and 11.66 acres. Grading and improvement of a commercial road traversing the site. Truck parking and storage on site. Construction of approximately 27,000 square feet of buildings and warehouse in the northern part of the site, along with 404 parking spaces and 73 loading spaces. (39.3 acres) | MND for Burke Minor Subdivision dated October 2, 2003 (otherwise relies on EOMSP EIR), plus an addendum dated February 23, 2001 to mitigate impacts. Significant and mitigable impacts identified for biological resources. Mitigation consists of off-site purchase of 20 acres of NNG to mitigate for 40 acres (entire site) of disturbed grassland at 0.5:1 ratio. Otay Logistics Center: ND dated August 2006 required fair share traffic contributions to mitigate traffic impacts for 635 (Phase I) and 715 (Phase II) ADT. Changes from mixed industrial (LU) to LE and Heavy Industrial. Also some potential impacts to cultural resources. |
| 7 | MUP 00-012/ Minor Dev. 00-012-02/L-14212/ P-00-012 TE *East Otay Mesa Auto Storage/ Aaron Construction Auto Auction Park/ Insurance Auto Auctions* | Northwest corner of Otay Mesa Road and Alta Road | Vehicle storage facility with weekly storage auctions. Temporary use (maximum five years). (38 acres) | MND dated July 9, 2003 for MUP 00-012. Previous MUP expired on July 9, 2008. Application for Time Extension submitted on July 8, 2008. Letter dated August 26, 2008 requested further analysis. Significant and mitigable impacts identified for traffic in 2003 MND. Site is currently vacant. Potential impacts to biological resources, geology, hydrology, traffic, and paleontological resources. Mitigation required fair share traffic contributions to mitigate traffic impacts from addition of 354 ADT. |

**Table 3.1-1 (cont.)**
**CHARACTERISTICS OF PROPOSED LAND DEVELOPMENT PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Identifying Project Number/ Project Name | Location | Proposed Improvements (Project Acreage) | Project Status |
|---|---|---|---|---|
| **County of San Diego (cont.)** | | | | |
| 8 | MUP 03-001/ *Otay Mesa Auto Transfer/Rowland* | Northeast corner of Otay Mesa Road and Enrico Fermi Drive | Storage area for operable vehicles as an interim use. (40.4 acres) | MND dated June 24, 2005 relying on EOMSP with modifications. Significant and mitigable impacts identified for biological and cultural resources, paleontology, traffic, and geology. Mitigation measures included four acres of NNG credits, biological monitoring for burrowing owls and raptor breeding, cultural and paleontological monitoring, control of construction emissions and fugitive dust, geological requirements, landscape requirements, traffic improvements, and a fair share contribution for SR-905/Old Otay Mesa Road realignment. |
| 9 | MUP 88-020/ STP 00-070/ *Bradley/Robertson Copart Salvage Auto Auctions* | 7377 Otay Mesa Road. Southwest corner of Otay Mesa Road at Alta Road | Modification of existing MUP to add a 300 feet by 140 feet auto storage facility on an existing graded auto storage lot. (acreage NA) | First ND dated February 22, 1994. Second ND dated November 2, 2001 to increase the number of employees from 10 to 40, add 900 feet of additional leach line, and extend the expiration date of the interim permit from November 2000 to November 2005. January 3, 2007 letter requested supplemental technical information regarding hydrology, storm water management, traffic, aesthetics, route locations, and the preliminary grading plan. |
| 10 | TM 5505/ *Otay Business Park (Paragon)* | Southeast of future intersection of Alta Road and Airway Road. | Subdivision into 59 industrial lots, in four phases, from west to east. No specific uses identified. Water, sewer and storm drain lines would be extended into the project site. Off-site improvements include extensions of Alta Road, Airway Road and Siempre Viva Road. The future alignment of SR-11 may traverse a portion of the site. (161.6 acres) | Scoping letter dated July 27, 2006. Supplemental EIR was requested May 30, 2007 for biology regarding preservation of vernal pools, storm water management, and easements. Letter from County dated March 13, 2008 stated no RPO wetlands identified.<br><br>Revised Request For SEIR dated April 23, 2008, listed potential impacts to biological resources. June 30, 2008 letter stated the County's acceptance of mitigation proposal. Mitigation for burrowing owl NNG habitat at a ratio of 1:1, with 0.5:1 on East Otay Mesa and the other 0.5:1 off East Otay Mesa in an area with the potential to support burrowing owl. Also identified as significant were stormwater and drainage impacts.<br><br>First iteration of the SEIR dated October 30, 2008, requested further discussion in the SEIR and technical studies. Potential impacts identified in SEIR were air quality; biological resources: project determined not to be consistent with the BMO, because it will impact all sensitive plant species on site. Impacts to sensitive animal species could occur also. More than five acres of raptor habitat might be impacted; cultural/paleontological resources; hazards; hydrology; noise; public services; transportation/traffic; utilities and service systems. |

**Table 3.1-1 (cont.)**
**CHARACTERISTICS OF PROPOSED LAND DEVELOPMENT PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Identifying Project Number/ Project Name | Location | Proposed Improvements (Project Acreage) | Project Status |
|---|---|---|---|---|
| **County of San Diego (cont.)** | | | | |
| 11 | STP-07-038/ L14625 *Vulcan-Otay Mesa Plant* | East of Alta Road and Otay Mesa Road intersection | Proposed asphalt and concrete plants. 1,500 square feet of office space, 2,800 square feet of break area, and 28 parking spaces. (13.5 acres) | NOD for grading of pad dated September 15, 2006. Approval of project relying on EOMSP EIR. Scoping letter for asphalt and concrete plant project dated October 29, 2007. Revised Scoping letter from County dated November 29, 2007 deleted the request for an archaeological report. Letter dated November 7, 2008 stated that biological resource mitigations were completed. First Iteration of Initial Study dated May 26, 2009 requested further analysis.<br><br>Grading project would impact 73.5 acres of NNG. Impacts to NNG will be mitigated at a 1:1 ratio by contributing $10,000 per acre of mitigation responsibility to the San Diego Foundation to be used for management of NNG preserve areas on Otay Mesa. Letter received on August 13, 2007, stated impacts to project would be 2.06 acres of CSS, 10.9 acres of NNG, mitigated by 8.54 acres off-site. Revised Scoping Letter from County dated November 29, 2007 deleted the request for an archaeological report. May 26, 2009 iteration requested further analysis for stormwater, air quality, traffic, and hydrology. |
| 12 | *Maple Leaf Industrial/Piper Otay Park* | West of SR-125, north of Otay Mesa Road/SR 905 and east of Piper Rancho Road | Subdivision into 13 industrial lots ranging in size from 1.03 to 2.61 acres. (24.84 acres) | Environmental Review Update Checklist Form for projects with Previously Approved Environmental Documents identified potential new impacts to biological resources, hazards, hydrology, and traffic which were not previously identified in the EOMSPEIR. Scoping Letter dated March 5, 2007 identified the same issues as above. Fourth iteration of Initial Study stated further analysis of traffic impacts was needed. |
| 13 | TPM 21046 P06-102 93-19-006AA *California Crossings* | Northwest corner of Otay Mesa Road and Harvest Road | A 352,502 square-foot regional shopping center. (28.4 acres) | Currently in environmental analysis. EIR not yet available for public review. Potential significant project impacts are to air quality (long-term mobile source emissions related to CO, VOC, and $PM_{10}$); traffic/circulation (significant impacts to intersections and roadways); biological resources (direct loss of 23.4 acres of sensitive NNG habitat, loss to raptor foraging and nesting habitat, impacts to migratory birds [mitigation includes acquisition of a 15.4-acre conservation easement and distance restrictions of construction during raptor nesting season]); and cultural and paleontological resources. Impacts determined not to be significant are associated with geology/soils, hazards/hazardous materials, hydrology/water quality, noise, aesthetics, agriculture, land use and planning, mineral resources, population and housing, public services and utilities, and recreation. |

**Table 3.1-1 (cont.)**
**CHARACTERISTICS OF PROPOSED LAND DEVELOPMENT PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Identifying Project Number/ Project Name | Location | Proposed Improvements (Project Acreage) | Project Status |
|---|---|---|---|---|
| **County of San Diego (cont.)** | | | | |
| 14 | *International Industrial Park* | Alta Road at Lonestar Road | Subdivide vacant land into 24 parcels for technology/business. 118.43 acres to be developed; 35.90 acres placed in open space; 16.26 acres used for internal circulation streets. Development will include three acres for the future permanent fire and sheriff station. (170.59 acres) | Pre-Application letter dated July 23, 2007 listed biological resources as one of the major project Issues.<br>Scoping Letter, dated February 3, 2009. |
| **City of San Diego** | | | | |
| 15 | *Cross Border Facility (a.k.a. Las Californias Center)* | 8077 Siempre Viva Road. South of Siempre Viva Road and east of Britannia Blvd. | 75,000 square foot facility with a pedestrian bridge allowing access to the Tijuana International Airport. This property has previously been approved for development with 31 industrial lots, as the Las Californias Center. (24.6 acres) | Draft NEPA EA was circulated for public review in December 2009.<br>Industrial subdivision (Las Californias Center) has been approved by the City but not yet constructed. |
| 16 | *Just Rite* | Northeast corner of Siempre Viva Road and Britannia Blvd. | 12 lots for industrial development. (38.68 acres) | Environmental Initial Study Review in 2005. |
| 17 | *Airway 18 Truck Terminal/Airway Auto Park Storage* | Southeast corner of Britannia Blvd. and Airway Road | Truck terminal. (acreage N/A) | N/A |
| 18 | *Lonestar/New Millenium* | East of the intersection of Lonestar Road, La Media Road and SR-125 | 1,150 to 1,350 residential units and 70-80 thousand square feet of industrial development. (119 acres) | Preliminary review opened August 2, 2008. Application date change June 18, 2008. |
| 19 | *Brown Field Technology Park* | South of Otay Mesa Road and west of Britannia Blvd. | Subdivision to consolidate 21 parcels into 20, and also vacate, dedicate and acquire easements for SR-905 for future industrial/business park development. (58.4 acres) | Expedited processing for economic development. Approved April 14, 2009. |
| 20 | *Brown Field Airport Development Project* | North of Otay Mesa Road, between Heritage Road and La Media Road | Development of general aviation uses, fixed base operations, hangars, restaurants, a new air and space museum, industrial area, solar generation facility, retail, transit, and other uses to support Brown Field Airport. (73 acres) | NA |

**Table 3.1-1 (cont.)**
**CHARACTERISTICS OF PROPOSED LAND DEVELOPMENT PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Identifying Project Number/ Project Name | Location | Proposed Improvements (Project Acreage) | Project Status |
|---|---|---|---|---|
| **City of San Diego (cont.)** | | | | |
| 21 | *Corrections Corporation of America* | East of Alta Road and north of Calzada de la Fuente | Development of a 408,522-square foot secure detention facility in two phases. The facility would include detention buildings to accommodate 2,132 beds and several other buildings for ancillary support services, as well as walled and partially covered outdoor recreation areas. Includes parking area and an equestrian trail. (37 acres) | The county is processing a MUP. Because this project would not result in environmental impacts beyond those assessed in the EOMSP EIR, no Supplemental EIR is expected to be prepared. |

NOP = Notice of Preparation; EIR = Environmental Impact Report; FEIR = Final Environmental Impact Report; ND = Negative Declaration; MND = Mitigated Negative Declaration; IS = Initial Study; NOD = Notice of Decision; EOMSP = East Otay Mesa Specific Plan; SWMP = Storm Water Management Plan; WUS = Waters of the U.S.; NNG = Non-Native Grassland; DCSS = Diegan Coastal Sage Scrub; QCB = Quino Checkerspot Butterfly; BMO = Biological Mitigation Ordinance; HCP = Habitat Conservation Plan; ADT = Average Daily Traffic; SFR = Single-family residences; MFR = Multi-family residences; DU = Dwelling units; TM = Tentative Map; TPM = Tentative Parcel Map; STP = Site Plan; MUP = Major Use Permit; RP = Reclamation Plan; ZAP = Minor Use Permit; RPL = Replacement; SPA = Specific Plan Amendment; MSCP = Multiple Species Conservation Program; R/W = Right of Way; MSCP = Multiple Species Conservation Program; N/A = Not Available.

**Table 3.1-2**
**CHARACTERISTICS OF PROPOSED PUBLIC WORKS PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Project Name | Location | Proposed Improvements | Project Status |
|---|---|---|---|---|
| **Caltrans Capital Improvements Projects** | | | | |
| A | SR-905 | From I-805 to the existing Otay Mesa POE at the U.S. - Mexico Border | Project consists of construction of a six-lane freeway including grade-separated local access interchanges, and a freeway-to-freeway interchange with future SR-125. | Final EIS/EIR dated July 2004. R/W has been acquired in the eastern portion of SR-905. Siempre Viva Road Interchange and associated segment of SR-905 have been constructed. Remaining portion of SR-905 between Siempre Viva Road and Britannia Boulevard is currently under construction. Completion is expected by late 2010. The western portion of SR-905 is expected to be completed in 2012. Clearing and preliminary grading within the SR-125/SR-905/SR-11 interchange area began in 2009. |
| B | I-805 Managed Lanes South | Along I-805 from East Palomar Street in Chula Vista to Landis Street in the City. | The project proposes to construct four buffer-separated Managed Lanes between East Palomar Street and SR-94, and two HOV/transit lanes between SR-94 and Landis Street, all in the freeway median. Includes associated ramps and transit stations and park-and-ride lots. | An EIR/EA is currently being prepared. |
| **GSA POE Improvement Projects** | | | | |
| C | U.S. Cargo Import Facility Improvements at Otay Mesa POE | East of the existing Otay Mesa POE at the U.S. - Mexico Border. | Project consists of adding lanes to a connector roadway, modifying approaches and fences for booths and other infrastructure improvements to enhance goods movement at the U.S. Cargo Import Facility | First phase of project completed; final phase is pending. |
| D | Otay Mesa POE Improvements Project | Otay Mesa POE at southern terminus of SR-905 | The proposed project would reconfigure the existing POE through the purchase of adjacent property. The project would add primary and secondary inspection booths to the passenger side. On the commercial side, the project would add primary inspection, empty-truck inspection, and exit booths, and would relocate the hazardous materials import inspection area from the export compound to the commercial import compound. | Feasibility Study and PDS complete. In early stages of environmental process. Scoping meeting held July 7, 2009. |

**Table 3.1-2 (cont.)**
**CHARACTERISTICS OF PROPOSED PUBLIC WORKS PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Project Name | Location | Proposed Improvements | Project Status |
|---|---|---|---|---|
| **GSA POE Improvement Projects (cont.)** | | | | |
| E | Reconfiguration and Expansion of the San Ysidro POE | San Ysidro POE at southern terminus of I-5 | Three-phase project includes demolition and new construction of most of the POE. New facility will consist of 210,000 square feet of building space, primary and secondary inspection areas, 29 northbound vehicle lanes, 2 northbound bus lanes, 6 southbound vehicle lanes, and a new southbound roadway to connect with Mexico's El Chaparral facility. | EIR/EIS complete. Upcoming schedule includes Phase I construction initiation in 2010 and completion of final phase construction in 2014. |
| **County Capital Improvement Projects** | | | | |
| F | Lonestar Road | From Alta Road to 0.5 mile west | Project is the construction of a new road. No planning group has been assigned and funding has yet to be determined. | Estimated completion date is Spring 2011. |
| G | Otay Mesa Road Widening | Otay Mesa Road from SR-905 to Enrico Fermi Drive | Project is the widening of 1.2 miles of Otay Mesa Road from SR-905 to Enrico Fermi Drive. No planning group has been assigned and funding has yet to be determined. | Estimated completion date is Winter 2010-2011. |
| **Otay Water District Capital Improvement Projects** | | | | |
| H | Otay Mesa Recycled Water System Capital Improvement Program R2087, R2077, R2058 Project | Wueste Road, Alta Road, and Airway Road/La Media Road | Construction of three recycled water pipelines to bring recycled water to Otay Mesa A 24-inch diameter pipeline in Wueste Road (R2087), a 24-inch pipeline in Alta Road (R2077), and a 16-inch diameter pipeline in Airway Road/La Media Road (R2058)<br><br>A pressure-reducing station is planned as part of the Wueste Road Pipeline to reduce pressure of recycled water arriving in Otay Mesa. | Design schedule for 2006 through 2010; construction scheduled for 2008 through 2012. Draft EIR issued February 26, 2010. |
| **City of San Diego Capital Improvements Project** | | | | |
| I | Otay Mesa Road Widening | Otay Mesa Road from Piper Ranch Road to Sanyo Avenue | Improve Otay Mesa Road to a four-lane Prime Arterial from Piper Ranch Road easterly to SR-125 and a 4-lane Major Road from SR-125 to Sanyo Avenue. | Design schedule for 2006 through 2010; construction scheduled for 2008 through 2012. |
| J | Otay Truck Route Widening | Border corridor truck route between La Media Road and Drucker Lane. | Widen existing truck route between La Media Road and Drucker Lane 12 feet to the north to accommodate an 11-foot safety lane and two 12-foot truck lanes. The additional width will require five feet additional R/W to the north. | Construction began in July 2010. |

**Table 3.1-2 (cont.)**
**CHARACTERISTICS OF PROPOSED PUBLIC WORKS PROJECTS IN THE CUMULATIVE STUDY AREA**

| Map Key | Project Name | Location | Proposed Improvements | Project Status |
|---|---|---|---|---|
| **San Diego Rural Fire Protection District** | | | | |
| K | Fire Station Relocation | Otay Mesa Road and Enrico Fermi Drive | As determined necessary on the basis of development in the region, a permanent 6,000-square foot Sheriff's station is planned to be co-located with a future 8,000-square foot fire station at the southeast corner of the intersection of Otay Mesa Road and Enrico Fermi Drive. | N/A |
| **SANDAG Capital Improvements Project** | | | | |
| L | South Bay Bus Rapid Transit (BRT) – Phase One | 21-mile BRT line between the existing Otay Mesa POE and downtown San Diego, via eastern Chula Vista, I-805 and SR-94. | The South Bay BRT is being developed to provide high-speed transit connections between downtown San Diego and the Otay Mesa Border Crossing along the future I-805 Managed Lanes and a dedicated transit way through eastern Chula Vista. At full buildout, project will include 15 stations with upgraded passenger shelters and technological enhancements, and premium coach buses. Options are being explored to connect the proposed Otay Mesa East POE to the BRT system. See Project B above for additional information. | Preliminary engineering, environmental work and final design in process; Phase One is planned to be in operation by late 2012. |

EIS/EIR = Environmental Impact Statement/Environmental Impact Report; R/W = Right of Way; SR = State Route; I- = Interstate; MG = million gallon; PES = Preliminary Environmental Study; NA = Not Available; NOP = Notice of Preparation

### 3.1.2 Environmental Consequences

As discussed above, land uses surrounding the proposed project are dominated by undeveloped land and industrial uses, along with several vehicle storage lots and the existing CVEF. Existing and proposed development in the land use study area consists primarily of industrial and transborder support uses, many of which were established due to proximity with the existing Otay Mesa POE and planned Otay Mesa East POE.

The project build alternatives and variations would traverse primarily undeveloped land and Caltrans R/W, with a few exceptions (refer to Figures 2-9a through 2-9d, Figures 2-11a through 2-11d, and Figures 2-12a through 2-12d). Section 3.5 of this EIR/EIS discusses in more detail the proposed parcel acquisitions under the various build alternatives and variations.

Two Interchange Alternative

As shown in Figures 2-9a through 2-9d, the Two Interchange Alternative would permanently convert to transportation-related uses 226.5 acres of undeveloped land designated for industrial uses, 2.9 acres of industrial land, 22.0 acres of graded land currently used for truck storage, 5.6 acres of land currently used as a vehicle auction yard under a temporary major use permit, and 0.3 acre of Otay Water District Land. An additional 7.4 acres of undeveloped land (a 150-foot strip) adjoining the international border fence is currently under federal ownership and CBP control; it would continue under CBP control for border protection purposes. It is expected that appropriate arrangements for shared use of this space would be agreed upon by FHWA/Caltrans and CBP, to allow simultaneous operation of the proposed POE and cross border travel, as well as continued border patrol activity along the POE's border frontage. The Two Interchange Alternative would traverse existing local roads (Enrico Fermi Drive, Sanyo Avenue, Harvest Road, La Media Road, and Britannia Boulevard), but this would not constitute a change of land use. Similarly, as noted above, the project would traverse existing highway R/W, but this also would not constitute a change of land use. Although implementation of SR-11 and the Otay Mesa East POE would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP (as explained in more detail in Section 3.2, Consistency with Federal State, Regional, and Local Plans and Programs), the project conversion of existing non-transportation land uses to transportation uses would represent a land use impact.

The Two Interchange Alternative would also traverse the following currently proposed private developments: Saeed TM/Airway Business Center, Dillard and Judd Roll County LLC/Enrico Fermi Industrial Park South County Commerce Center, Otay Mesa Travel Plaza, Bradley/Robertson Copart Salvage Auto Auctions, Otay Crossings Commerce Park, and Otay Business Park (Paragon). Specific acquisition acreages for these parcels are discussed in Section 3.5, *Relocations and Real Property Acquisition*. With respect to the potential for noise-related land use incompatibility impacts, per Caltrans guidelines, noise abatement for planned development is only considered if the development has received all final local jurisdictional discretionary approvals before final approval of the transportation project. Since none of these projects has received final discretionary approval, no noise impacts to planned land uses are assessed. Potential visual impacts would be minimized through measures identified in the project Visual Impact Assessment (VIA; HELIX 2010a), and included in this EIR/EIS as well. Although the project has been identified for many years in the County General Plan, EOMSP, City General Plan and OMCP, the conversion of portions of these proposed developments to SR-11 R/W and the POE site would be considered a substantial land use impact. Much of the planned development in the area is industrial use associated with the maquiladora industry, and would benefit from the proposed project. Property owners/developers have been tracking the proposed project and have been planning/designing their development projects to accommodate SR-11 and the proposed POE, in the location that was selected in the Phase I ROD for the proposed project. Nevertheless, the project would be considered to result in a land use incompatibility impact with planned uses, because the project would convert designated industrial land to freeway use.

One Interchange Alternative

The One Interchange Alternative would permanently convert to transportation-related uses 227.41 acres of undeveloped land designated for industrial uses, 2.0 acres of industrial land, 10.5 acres of graded land currently used for truck storage, 13.6 acres of land currently used as a vehicle auction yard under a temporary major use permit (refer to Figures 2-11a through 2-11d), and 0.3 acre of OWD land. As in the case of the Two Interchange Alternative, an additional 7.4 acres of undeveloped land adjoining the international border fence is currently under federal ownership and CBP control; it would continue under CBP control as part of the proposed POE. The One Interchange Alternative also would traverse existing local roads and highway R/W, but this would not constitute a change of land use. As in the case of the Two Interchange Alternative, the project conversion of existing non-transportation land uses to transportation uses would represent a land use impact.

The One Interchange Alternative would also traverse the same currently proposed private developments described above for the Two Interchange Alternative. The implementation of a single local interchange instead of the two interchanges contemplated in the Phase I ROD for the project would require design adjustments on the part of the property owners of these proposed developments. As noted above, the conversion of portions of the proposed developments to SR-11 R/W and the POE site would be considered a substantial land use impact, despite the fact that the project would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP.

No Interchange Alternative

The No Interchange Alternative would permanently convert to transportation-related uses 214.5 acres of undeveloped land designated for industrial uses, 2.0 acres of industrial land, 10.7 acres of graded land currently used for truck storage, 4.8 acres of land currently used as a vehicle auction yard under a temporary major use permit (refer to Figures 2-12a through 2-12d), and 0.3 acre of OWD land. As mentioned for the other alternatives, an additional 7.4 acres of undeveloped land adjoining the international border fence is currently under federal ownership and CBP control; it would continue under CBP control as part of the proposed POE. The No Interchange Alternative would traverse existing local roads and highway R/W, but this would not constitute a change of land use. As in the case of the Two and One Interchange Alternatives, the project conversion of existing non-transportation land uses to transportation uses would represent a land use impact.

The No Interchange Alternative would also traverse the same currently proposed private developments described above for the Two Interchange Alternative. The implementation of SR-11 with no local interchanges instead of the two interchanges contemplated in the Phase I ROD for the project would require design adjustments on the part of the property owners of these proposed developments. As noted above, the conversion of portions of proposed developments to SR-11 R/W and the POE/CVEF site would be considered a substantial land use impact, despite the fact that the project would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP.

Variations on the Build Alternatives

*No Toll Variation*

The No Toll Variation of each of the build alternatives would involve conversion of the same land uses to transportation-related uses and the same partial acquisitions as described for the toll versions of these build alternatives. As noted above, this conversion of existing non-transportation land uses would represent a land use impact. The conversion of portions of proposed developments to SR-11 R/W and the

POE/CVEF site would also represent a land use impact, despite the fact that implementation of SR-11 and the Otay Mesa East POE would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP.

*46-foot Median Variation*

Compared to the baseline project build alternatives with the 22-foot median, the 46-foot Median Variation of each of the build alternatives would convert slightly (approximately two percent) more developed land to transportation uses in each case. For all project build alternatives, the 46-foot Median Variation would result in an additional 0.7 acre converted from industrial developed land to transportation uses. As noted above, this conversion of existing land would represent a land use impact.

*SR-125 Connector Variation*

The construction of the elevated connector from southbound SR-125 to eastbound SR-11 would take place entirely within existing Caltrans R/W among other planned connector ramps associated with a large interchange, so there would be no additional land use conversion or compatibility impacts to existing or planned developments, when combined with any of the previously described build alternatives. The additional connector would increase accessibility to project area industrial properties from the north, which is a land use benefit to these properties, although the traffic study predicts that only 3,700 to 4,000 average trips in 2015 and 6,700 to 8,600 average trips (ADT) in 2035 would use this connector each day (depending on the project alternative; VRPA Technologies [VRPA] 2009). This benefit would be particularly important under the No Interchange Alternative, since access to and from local businesses would be more limited under this alternative.

*SR-905/SR-125/SR-11 Full Interchange Variation*

The construction of the additional connectors proposed under the SR-905/SR-125/SR-11 Full Interchange Variation would take place entirely within existing Caltrans R/W among other planned connector ramps associated with a large interchange, so there would be no additional land use conversion or compatibility impacts to planned developments, when combined with any of the previously described build alternatives. This variation would provide more complete accessibility to and from East Otay Mesa, which would represent a land use benefit and would be compatible with the industrial properties on the mesa; however, the traffic study indicates only the following low ADT for each connector, with traffic volumes projected to be the same in each direction:

| **Year/Alternative** | **ADT** |
|---|---|
| **2015** | |
| Two Interchange Alternative | 1,000 |
| One Interchange Alternative | 1,000 |
| No Interchange Alternative | 1,400 |
| **2035** | |
| Two Interchange Alternative | 2,000 |
| One Interchange Alternative | 2,200 |
| No Interchange Alternative | 6,500 |

This benefit would be particularly important under the No Interchange Alternative, since access to and from local businesses, and from local businesses to the proposed POE, would be more limited under this alternative.

Siempre Viva Road Full Interchange Variation

This variation would require slightly more land for transportation uses in the vicinity of Siempre Viva Road. The Siempre Viva Road Full Interchange Variation would result in an additional 20.2 acres of undeveloped land designated for industrial use permanently converted to transportation uses. As noted above, this conversion of existing land would represent a land use impact.

No Build Alternative

Implementation of the No Build Alternative would not convert existing land uses to transportation uses, or introduce incompatible land uses to the area, and there would be no short-term impact to land use. However, the No Build Alternative would deviate from the planned development in the area by not providing SR-11 or POE, and could adversely affect the existing land uses that were developed in anticipation of the proposed project, as well as other planned industrial development in the area, by perpetuating the current excessive border wait times and the associated business inefficiencies.

It is expected that development would proceed in this area, with or without the proposed project. With a decision not to implement SR-11 and Otay Mesa East POE project at this time, the County could choose to amend the EOMSP to remove SR-11 and the new POE from the Circulation Plan, and process active tentative maps, no longer reserving R/W for these facilities.

As noted above under *Affected Environment*, under Mexican law, the land currently reserved for a new POE by the Mexican government would have to be released for other uses by 2011, if it is not purchased for use as a POE by that time. This land, previously reserved by the Mexican government for development with the Otay II POE, could, therefore, become developed with other uses under the No Build Alternative and no longer be available for future implementation of a POE.

It is possible that the No Build Alternative would only delay implementation of the Otay Mesa East POE. If development were to proceed on the U.S. and/or Mexico sides of the border in the East Otay Mesa area, a situation could develop wherein acquisition of developed property would be necessary to implement SR-11 and the Otay Mesa East POE in the future. If development leaves only the most environmentally constrained land available for these facilities and the facilities must be constructed in close proximity to more existing development, associated visual- and noise-related land use compatibility impacts may eventually be greater than they would be under the currently proposed project build alternatives.

### 3.1.3 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives**

The project conversion of existing and planned land uses would represent a land use impact under all of the build alternatives. Extensive efforts have been made to design the project in such a way that impacts to existing industrial uses would be minimized, including the proposal of build alternatives with a 22-foot median in the Sanyo Avenue area to minimize operational impacts to businesses. Project land acquisition in undeveloped areas has also been planned to accommodate future needs through 2035, to avoid a situation in which future acquisition of developed property would be necessary. Where land acquisition is unavoidable, property owners would be compensated in accordance with the Uniform Relocation

Assistance and Real Property Acquisition Policies Act of 1970, as amended (refer to Section 3.5 and Appendix F for relocation assistance information).

Aside from land use conversion impacts, the build alternatives would not impact farmlands. Therefore, no additional avoidance, minimization, and/or mitigation measures would be required.

**Variations on the Build Alternatives**

No Toll Variation and the SR-905/SR-125/SR-11 Interchange Variations

The above-listed avoidance, minimization, or mitigation measures would still apply if any of the variations of the build alternatives are implemented, and no additional measures would be required. This conclusion would apply to the No Toll Variation, the SR-905/SR-125/SR-11 Interchange variations or the Siempre Viva Road Full Interchange Variation.

46-foot Median Variation

Land use conversion impacts in the Sanyo Avenue area would be greater under the 46-foot Median Variation, and efforts to minimize partial acquisitions and operational issues for existing businesses in this area would be less successful than under the baseline build alternatives that would have a 22-foot median. Nevertheless, the existing businesses would be able to continue operations, as discussed in more detail in Section 3.5, *Relocations and Real Property Acquisition*.

**No Build Alternative**

Unlike the project build alternatives, the No Build Alternative would not be consistent with regional and local planning documents. However, because no action would occur under the No Build Alternative, no avoidance, minimization, and/or mitigation measures would be required.

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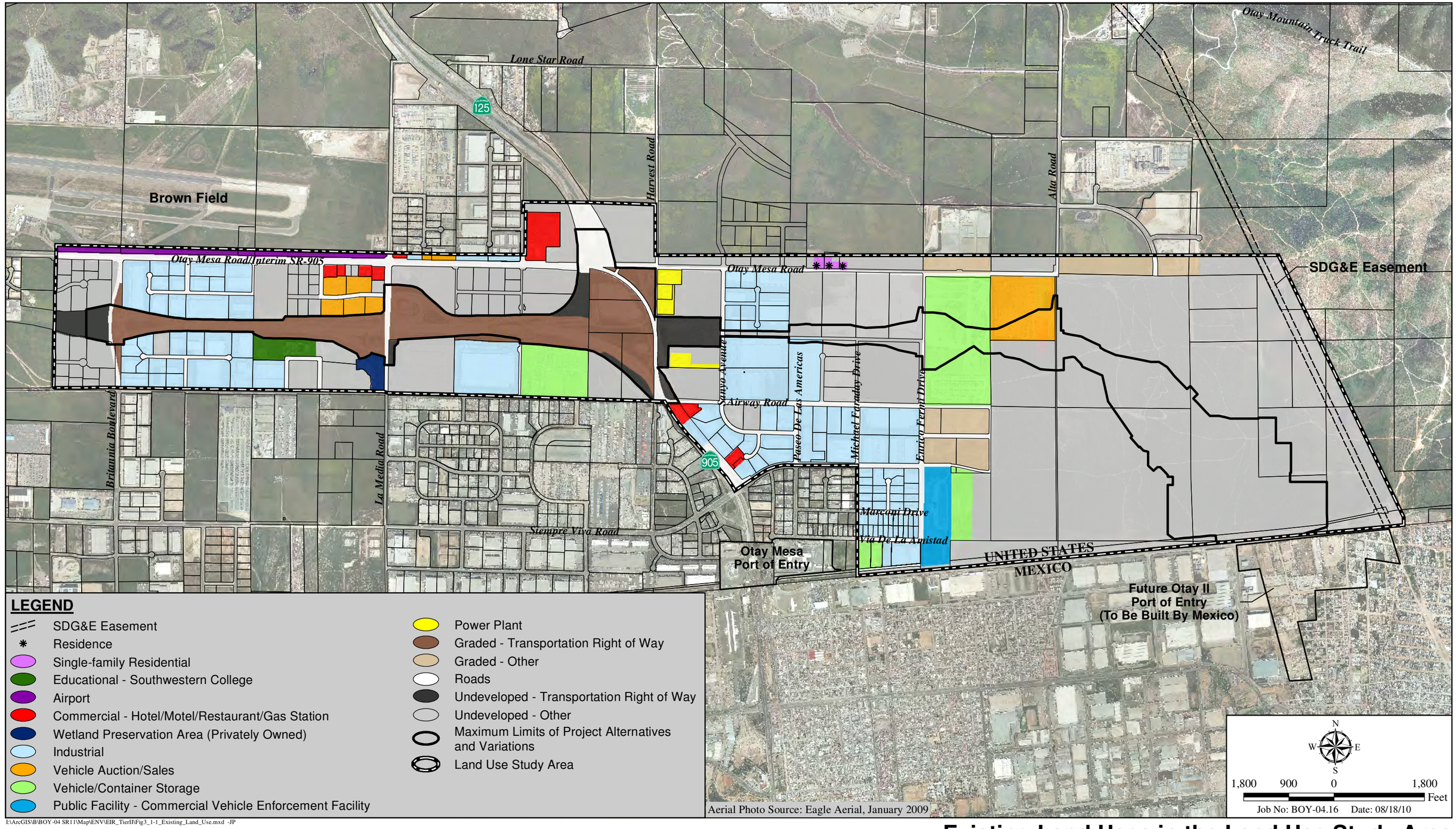


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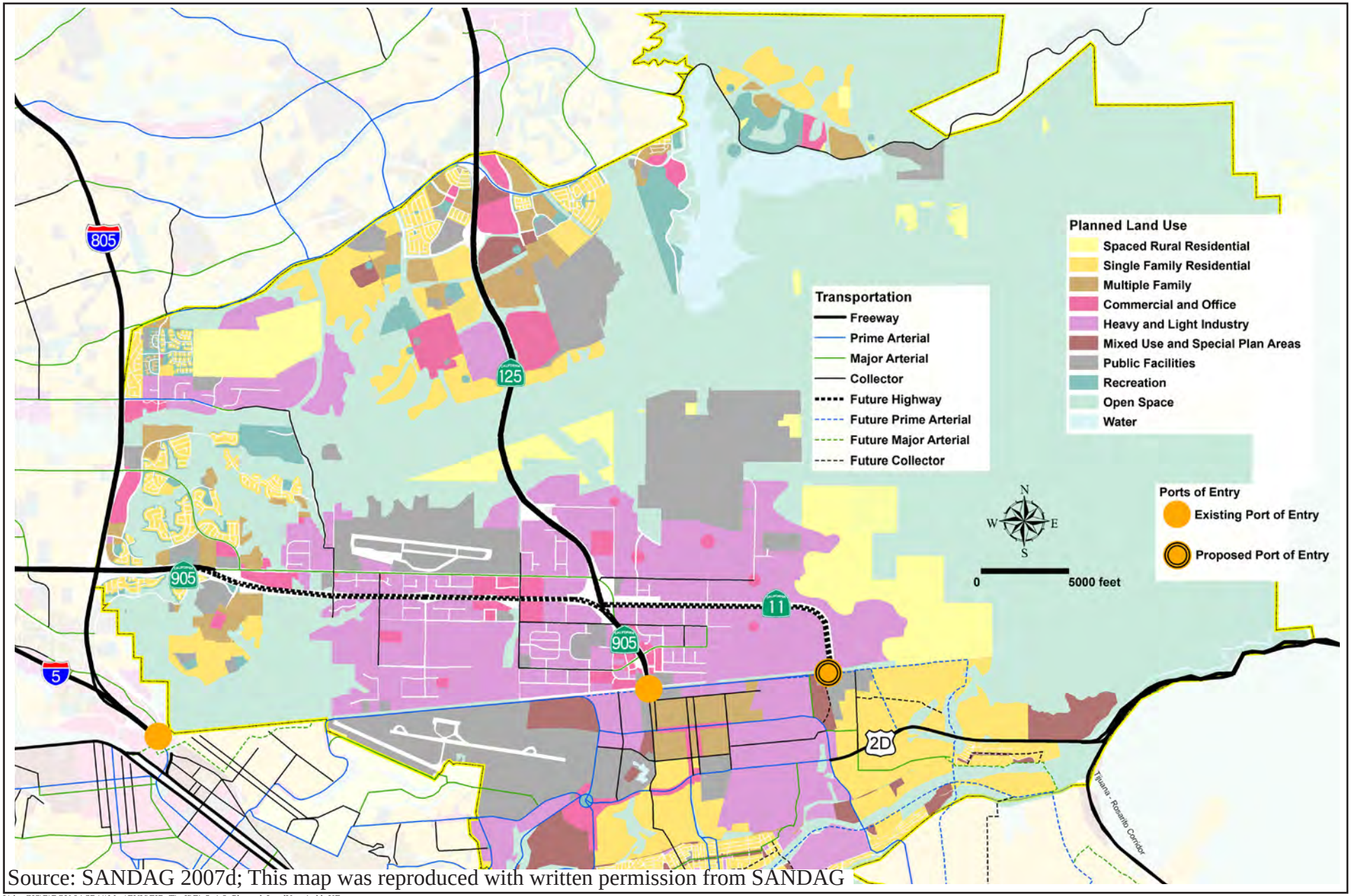
# Existing Land Uses in the Land Use Study Area

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.1-1




Source: SANDAG 2007d; This map was reproduced with written permission from SANDAG

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## Planned Land Uses in the San Diego/Tijuana Border Region

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.1-2

# 3.2 CONSISTENCY WITH FEDERAL, STATE, REGIONAL, AND LOCAL PLANS AND PROGRAMS

This section of the EIR/EIS assesses the proposed project's consistency with relevant adopted land use plans and programs, based on the Tier II project CIA (HELIX/CIC Research 2010), dated July 2010.

## 3.2.1 Affected Environment

Plans, policies and ordinances that pertain to land use for the project site are contained in elements and policies of Section 4(f) of the DOT Act of 1966, the RTP, RTIP, SANDAG Regional Comprehensive Plan (RCP), Natural Community Conservation Planning (NCCP) Program, County General Plan, Otay Subregional Plan (OSP), the EOMSP, the County Zoning Ordinance, the County Light Pollution Code/Dark Skies Ordinance (LPC), the County Biological Mitigation Ordinance (BMO), the County Resource Protection Ordinance (RPO), the County Noise Ordinance, the City of San Diego's General Plan, the City's OMCP, and the City Noise Ordinance. These policies address a variety of issues, including development of a comprehensive regional transportation plan, efficient growth patterns, development at appropriate densities in accordance with existing community character, conservation of sensitive habitats, provision of open space and recreational opportunities, farmland policies, protection of visual amenities, regulation of signage and lighting, and protection against incompatible land uses. These land use plans and ordinances are described below. Although this project is not subject to local plans, guidelines, and ordinances, Caltrans and FHWA strive to be consistent with them, and inconsistencies are disclosed.

There are no wild and scenic rivers in the regional study area and the project alternatives are not located in the coastal zone; therefore, policies related to these issues are not discussed.

### Federal Plans and Policies

U.S. Army Corps of Engineers Special Area Management Plans

SAMPs are developed by the U.S. Army Corps of Engineers (USACE) to take a comprehensive view of entire watersheds, in contrast to the traditional project-by-project approach to the analysis of impacts to waters of the U.S. The comprehensive SAMP approach facilitates evaluation of cumulative loss of resources over time, with the goal of identifying priority areas for preservation, identifying potential restoration areas, determining the least environmentally damaging locations for proposed projects, and establishing alternative permit processes applicable to the SAMP areas. The SAMP for the Otay River watershed, which would include the proposed project alternatives, is currently being developed and is not yet complete for review (Jones, personal communication 2010). Therefore, the SAMP is not analyzed here.

### Regional Plans and Policies

Border Master Plan

The California-Baja California Border Master Plan (Border Master Plan) is a binational comprehensive approach to coordinate planning and delivery of projects at land POEs and transportation infrastructure serving those POEs in the California-Baja California region. It was commissioned by the U.S./Mexico Joint Working Committee to the Caltrans and the Secretariat of Infrastructure and Urban Development of Baja California (Secretaría de Desarrollo Urbano del Estado de Baja California or SIDUE) for the California-Baja California border region. The Border Master Plan ranks the Otay Mesa East/Otay II

POEs (and associated infrastructure) as the highest priority border project in the California-Baja California region.

Regional Comprehensive Plan for the San Diego Region

The RCP (SANDAG 2004) is the strategic planning framework for the San Diego region. It creates a regional vision and provides a broad context in which local and regional decisions can be made that foster a healthy environment, vibrant economy and high quality of life for all residents. The RCP balances regional population, housing and employment growth with habitat preservation, agriculture, open space, and infrastructure needs. One of the major focuses of the RCP is improving connections between land use and transportation using smart growth principles. The RCP addresses the major elements of planning for the San Diego region, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, and border issues. The RCP recognizes that many of the region's major transportation facilities are operating at or beyond their current capacities. The Transportation and Border Elements of the RCP are discussed below.

*Transportation Element*

The Transportation Element of the RCP discusses the vision for the San Diego region in 2030 with regard to transportation and includes a description of existing conditions, key issues and recommended goals, policy objectives and actions. The RTP (SANDAG 2007a) plays a key role in implementing the RCP, along with other plans and programs such as the Short-Range Transit Plan, the Congestion Management Program, the RTIP, international and interregional plans and partnerships, and others. In order to implement the RCP, the RTP and related programming documents must be updated in a way that maximizes opportunities for local jurisdictions to implement smart growth. Relevant key issues include implementing the 2030 Mobility Network presented in the RTP, funding of necessary improvements and coordinating among agencies. Applicable policy objectives include implementing the 2030 Mobility Network in an efficient and cost-effective manner, reducing traffic congestion on freeways and arterials, and providing improved access to goods movement centers and intermodal facilities to promote economic prosperity. Since the SR-11 project is included in the 2030 Revenue Constrained RTP adopted in 2007, it would constitute an integral part of the realization of the RCP's goals.

*Border Element*

The Borders chapter of the RCP discusses the distinct opportunities and challenges of the cross-border region. General principles include integrated planning and economic development with governments of neighboring counties, tribal governments and Mexico. The chapter proposes policy objectives centered on the six planning issue areas of jobs/housing accessibility, transportation, energy and water supply, environment, economic development, and homeland security. The element offers a binational perspective on each of these issue areas, emphasizing the opportunities and challenges associated with the movement of people and goods across the international border while balancing national security concerns.

Regional Transportation Plan

The applicable transportation plan for the proposed project is the 2030 San Diego Regional Transportation Plan: Pathways for the Future (2030 RTP). In November 2007, the SANDAG Board of Directors approved the 2030 RTP (SANDAG 2007a), which is the adopted long-range transportation planning document for the San Diego region. It is used as the basis for funding decisions made through the RTIP (SANDAG 2008), which is discussed below. The plan covers public policies, strategies and investments to maintain, manage and improve the regional transportation system through 2030. The RTP is a major component of the transportation element of the RCP. The RTP was developed around four

main components: land use, system development, system management, and demand management. The plan addresses new and improved connections to more efficiently move people and goods throughout the region by providing more convenient, fast and safe travel choices for public transit, ridesharing, walking, biking, private vehicles, and freight.

Applicable policy goals of the RTP include improving the mobility of people and freight, improving accessibility to major employment and other regional activity centers, improving the reliability and safety of the transportation system, maximizing the efficiency of the existing and future transportation system, and minimizing effects on the environment. The RTP specifically includes major projects to improve access to border crossings, expand freight rail service and coordinate commercial vehicle crossings, with the goal of modernizing and transforming transportation infrastructure along the California portion of the U.S. - Mexico border.

The RTP includes a Revenue Constrained Scenario of facilities and programs that would best maintain mobility in the region if the funding levels for transportation do not increase before 2030. The RTP also includes a Reasonably Expected Revenue Scenario (if more funding becomes available) and an Unconstrained Scenario. The RTP's study area is the County of San Diego. Figure 3.2-1, *Regional Transportation Plan 2030 Revenue Constrained Network*, illustrates the RTP 2030 Revenue Constrained Network, including both the highway and transit systems. The SR-11 project is included in all three revenue scenarios of SANDAG's November 2007 RTP as a four-lane toll road. The SR-905 project, which would be modified under the proposed SR-11/POE project, is also included in all three revenue scenarios of SANDAG's November 2007 RTP (as a six-lane freeway in the Revenue Constrained Scenario, and as an eight-lane freeway in the Reasonably Expected Revenue and Unconstrained Scenarios).

In 2005, SANDAG formed a Regional Freight Working Group (FWG) composed of public and private freight agencies and organizations to develop a comprehensive Regional Freight Strategy. Initially, this strategy has assumed an average annual growth rate of five percent for all freight. The Regional Freight Strategy identifies a list of prioritized projects known as the San Diego Regional Goods Movement Action Plan (GMAP), based upon objective criteria. The RTP includes actions to pursue funding for GMAP projects not already included in the highway and rail plans. The Otay Mesa East POE and SR-11 are considered a top priority of the GMAP of the RTP.

Regional Transportation Improvement Program

The RTIP is consistent with the RTP and incrementally implements the vision presented in the RTP. The RTIP is a five-year capital improvement program for transportation projects that is updated by SANDAG every two years and reflects the region's priorities for short-range transportation system improvements. The currently adopted 2008 RTIP (SANDAG 2008) covers fiscal years (FYs) 2008/2009 through 2012/2013. Funding for the transportation projects in the RTIP comes from federal, state and local revenue sources, including TransNet, the local transportation sales tax program. The SR-11 project is included in the 2008 RTIP, allocating funds for studies for the future construction of a four-lane highway. The SR-905 project, to be modified under the proposed SR-11/POE project, is also included in the 2008 RTIP, allocating funds for Phase I of construction of a six-lane freeway between I-805 and the existing Otay Mesa POE. The February 2011 amendment to the 2010 RTIP is expected to reflect both SR-11 and the proposed project's modifications to SR-905 between the SR-905/SR-125/SR-11 Interchange and Britannia Boulevard, as necessary to accommodate the connection of SR-905 with SR-11, including the proposed auxiliary/merging lanes.

Natural Community Conservation Planning Program/Multiple Species Conservation Programs

The NCCP initiated by the State of California in 1991 resulted in the promulgation of the special 4(d) rule of the Federal Endangered Species Act (FESA). This rule focuses on conserving coastal sage scrub habitat in order to avoid the need for future federal and state listing of each individual coastal sage scrub-dependent species. The City of San Diego, the County of San Diego, USFWS, California Department of Fish and Game (CDFG) and other local jurisdictions joined together in the late 1990s to develop the Multiple Species Conservation Program (MSCP). The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve.

The project is located within the South County Segment of the County's MSCP Subarea Plan (Subarea Plan). The Subarea Plan assigns various development review process requirements for development projects within the planning area, based on the sensitivity of the geographic area within which the project is located. Although the proposed project is not subject to these processes, because Caltrans is not an enrolled agency under the MSCP and the project does not require County approval, the designations reflect the relative sensitivity of the biological resources in each mapped area. The land use study area contains four such designations: Take Authorized, Minor Amendment Area, Minor Amendment Area Subject to Special Considerations and Major Amendment Area. The Take Authorized area includes Enrico Fermi Drive. The majority of the rest of the land use study area is a Minor Amendment Area where habitat can be partially or completely eliminated (with appropriate mitigation) without significantly affecting the overall goal of the County's Subarea Plan (County 1997). Minor Amendment Areas Subject to Special Considerations occur in the southern and eastern portions of the land use study area. These are subject to certain requirements of the County's EOMSP, including the preparation and County approval of a Resource Conservation Plan prior to any development that includes clearing or grading. A Major Amendment Area occurs in the northeast corner of the land use study area. Major Amendment Areas require Wildlife Agency oversight to be processed in conformity with all applicable laws and regulations (County 1997).

The County is undergoing an amendment process for the Quino checkerspot butterfly for the entire County MSCP Subarea, including areas encompassed by the proposed SR-11/POE site.

The City's MSCP Subarea Plan has similarly been prepared to meet the requirements of the California NCCP Act of 1992. The City's MSCP Subarea Plan is consistent with the NCCP and describes how the evaluation of proposed development projects relative to the City's portion of the MSCP Preserve (the Multiple Habitat Planning Area [MHPA]) will be implemented.

The City's MSCP (City 1997) identifies an MHPA that is intended to link all core biological areas into a regional wildlife preserve. The land use study area is not within or adjacent to the MHPA; the nearest MHPA preserve is south of Airway Road at La Media Road, approximately 1,300 feet south of the proposed modifications to SR-905 to accommodate the connectors with SR-11.

Complete Streets Policies of the U.S., California, Caltrans and the City

Complete streets are designed to provide convenient routes and a variety of transportation options while enabling safe access for motorists, transit users, pedestrians and bicyclists of all ages and abilities. The federal Complete Streets Act of 2009 defines complete streets policies and directs state departments of transportation and metropolitan planning organizations to adopt such policies and apply them to federally funded transportation projects. State, regional and local governments and organizations have also adopted related policies, including California's Complete Streets Act of 2008 (Assembly Bill 1358),

Caltrans' Deputy Directive DD-64-R1 (Complete Streets – Integrating the Transportation System) and the City of San Diego's Street Design Manual.

**San Diego County Plans and Policies**

County General Plan

The County General Plan (adopted January 3, 1979, amended April 17, 2002, GPA 01-01) designates planned land uses that are considered appropriate for each portion of the County. In the Regional Land Use Element of the General Plan, the existing regional policy category for the County portion of the proposed project site is (21) Specific Plan Area. Various policies of the Open Space, Regional Land Use, Circulation, Seismic Safety, Conservation, Public Facility, Public Safety, Scenic Highway and Noise elements of the General Plan would be applicable to the proposed project. These elements are discussed below.

It should be noted that, at the time this EIR/EIS is being prepared, the County is undergoing a comprehensive general plan update. The Draft General Plan was completed in November 2008 and was made available for public review and comment. While the general plan update is acknowledged to be in process, this EIR/EIS evaluates the proposed project against the adopted General Plan and Zoning Ordinance.

Circulation Element: The County General Plan's Circulation Element consists of a map and accompanying text depicting corridors for public mobility and access that are planned to meet the needs of the existing and anticipated population of San Diego County. The objectives of the element are to provide a guide for the provision of a coordinated system of highway routes serving all sections of San Diego County, to help achieve efficiency and economy in this field, to facilitate planning in subdivisions and other land development programs, and to inform the citizens of the county of these plans. It is the intent of the Circulation Element to preserve a corridor uninhabited by any permanent structure for future road R/W for every road shown on the Circulation Element. SR-11 is included conceptually in the Circulation Element of the adopted County General Plan, as amended.

Regional Land Use Element: The overall goal of the Regional Land Use Element is to accommodate population growth and influence its distribution in order to protect and use scarce resources wisely; preserve the natural environment; provide adequate public facilities and services efficiently and equitably; assist the private sector in the provision of adequate, affordable housing; and promote the economic and social welfare of the region. Of particular relevance to the proposed project are the capital facilities goals, which seek to: assure efficient, economical and timely provision of facilities (including roads) to accommodate development; assure coordination among agencies in provision of facilities and services; and provide a facilities program capable of adjustments to meet changing needs and conditions.

Open Space Element: The Open Space Element seeks to promote health and safety by regulating development of lands; to conserve scarce natural resources and lands; to conserve open spaces needed for recreation, education and scientific activities; and to preserve those open space uses that distinguish and separate communities. Of relevance to the proposed project, it seeks to promote these values on both privately and publicly owned lands and easements.

Seismic Safety Element: The goal of the Seismic Safety Element is to minimize loss of life and destruction of property in San Diego County by making planning recommendations giving consideration to seismic and geologic occurrences and their long-range impact on the community. Of particular relevance to the proposed project, it requires that the County take into consideration delineated areas of seismic and geologic hazard land classification when planning roads and utility networks.

Conservation Element: The Conservation Element describes the natural resources of San Diego County (including water, vegetation and wildlife habitat, minerals, soil, astronomical dark sky, and cultural sites), and presents policies and action programs to conserve these resources.

Public Facility Element: The Public Facility Element has the overall goal of ensuring a strong linkage between public facility planning and land use planning. It promotes regional, subregional and interagency coordination; timing the provision of public facilities with local development; and equitable and sufficient funding for public facilities. It recognizes the need for a safe, convenient, economical and efficient, integrated transportation system, and has as a goal the maintenance of Level of Service (LOS) C or better on County Circulation Element roads.

Public Safety Element: The purpose of the Public Safety Element is to introduce safety considerations into the planning and decision-making processes in order to reduce the risk of injury, loss of life and property damage associated with fire hazards, non-seismic geologic hazards, crime prevention, and emergency services. Of relevance is the element's goal of optimizing the organization and delivery of emergency services.

Scenic Highway Element: The Scenic Highway Element establishes a comprehensive Scenic Highway Program and seeks to protect, enhance and promote public awareness of scenic resources within both rural and urban scenic highway corridors. No officially designated state scenic highways are located within the Otay Mesa area (Caltrans 2007b).

Noise Element: The Noise Element seeks to establish a coordinated, ongoing program to protect and improve the acoustical environment in San Diego County, including regulation of noise at its source, control of noise transmission paths, and minimization of noise at receiver sites. Policy 4b of the Noise Element seeks to prevent noise-sensitive areas from being subject to noise in excess of 50 decibels (dB) community noise equivalent level (CNEL). The element acknowledges, however, that federally funded road projects are subject to applicable FHWA standards, only.

Otay Subregional Plan

The OSP (adopted May 18, 1983, GPA 83-01; amended July 27, 1994, GPA 94-02) designates planned land uses in the Otay subregional area. The OSP currently shows the land use study area as having a single Land Use Element designation: (21) Specific Plan Area. Various Land Use, Public Services and Facilities, and Conservation Policies of the OSP would be applicable to the proposed project. The OSP recognizes in its Land Use, Circulation and Coordination Goals the need for a second POE in Otay, the impact a new POE would have on the local and regional road and highway network, and the need for planning coordination with Mexico. The County is currently preparing an update of the OSP in conjunction with the General Plan Update Draft Land Use Plan.

East Otay Mesa Specific Plan

The OSP was amended December 19, 1990, to designate East Otay Mesa as (21) Specific Plan Area and incorporate the EOMSP Guidelines. The original EOMSP and Site Planning and Design Guidelines were adopted in July 1994. The amended EOMSP adopted June 12, 2002 (SPA 00-005 and GPA 02-CE1) divided the plan area into two subareas. The Specific Plan Amendment (SPA) governs land within Subarea 1 (the western portion of East Otay Mesa), while Subarea 2 (the eastern portion) remains largely governed by the EOMSP and Site Planning and Design Guidelines approved as part of the amended OSP in July 1994. The proposed land use study area lies within both Subareas 1 and 2.

A more recent County-initiated SPA, approved on August 1, 2007, addressed both subareas and revised the circulation plan, bicycle network, and regulatory standards relating to site plan requirements, fencing detail, driveway location criteria, and sidewalk design. As depicted in Figure 3.2-2a, *East Otay Mesa Specific Plan Circulation Plan Map*, the revised EOMSP circulation plan includes SR-11 and the Otay Mesa East POE in locations approximately corresponding to the proposed project build alternatives (County 2007a). The identified conceptual POE site, however, is smaller than the POE site proposed as part of this project (approximately 22 acres compared to 106.3 acres).

As noted in Section 3.1, *Existing and Future Land Use*, the majority of the County land in the land use study area is designated for industrial and technology business uses under the EOMSP, as amended (refer to Figure 3.2-2b, *East Otay Mesa Specific Plan Land Use Designations*). A small area in the northeast corner of the land use study area is designated rural residential (one dwelling unit per 20 acres), and another small area at the northeast corner of the intersection of Alta Road and Otay Mesa Road is designated commercial. A range of alternative land use maps is being developed as part of the County's general plan update process and EIR. The anticipated preferred alternative identifies the land use study area as Specific Plan Area, accommodating uses specified in the specific plan (County 2008a).

County Biological Mitigation Ordinance

The BMO is the mechanism by which the County implements the MSCP at the project level to attain the goals set forth in the County MSCP Subarea Plan. The BMO contains design criteria and mitigation standards that, when applied to projects requiring discretionary permits, protect habitats and species and ensure that a project does not preclude the viability of the MSCP Preserve System. In this way, the BMO promotes the preservation of lands that contribute to contiguous habitat core areas or linkages. Under the BMO, the habitat located within proposed SR-11 and the POE site qualifies as a Biological Resource Core Area (BRCA), with associated avoidance and mitigation requirements specified in the BMO. Although the proposed SR-11/Otay Mesa East POE project does not require County approval, Caltrans does strive to be consistent with County policies and ordinances.

County Resource Protection Ordinance

The RPO (effective April 20, 2007) provides development controls for unique resources within the County deemed to be fragile, irreplaceable and vital to the general welfare of the County's residents. The resources protected by the County include: steep slopes, sensitive biological habitats, wetlands, floodways, floodplain fringes, and certain prehistoric and historic sites. The RPO requires that prior to approval of tentative maps or Major Use Permits (MUPs), a Resource Protection Study must be completed and findings made relative to compliance with the provisions of the RPO. Although the proposed SR-11/Otay Mesa East POE project does not require County approval, Caltrans does strive to be consistent with County policies and ordinances.

**City of San Diego Plans and Policies**

City General Plan

The General Plan (City 2008) represents the comprehensive long-term plan for the physical development of the City and provides a foundation for land use decisions within the City. In order to achieve this plan, the General Plan includes a series of elements that address specific aspects of the City's development. The General Plan elements that relate to the project are the Mobility Element and the Economic Prosperity Element. The Mobility Element contains goals and policies intended to attain a balanced, multi-modal transportation network that will accommodate forecast capacity needs and foster economic growth. The Economic Prosperity Element of the General Plan is intended to increase wealth and the

standard of living of all San Diegans with policies that support a diverse, innovative, competitive, entrepreneurial, and sustainable local economy.

City Otay Mesa Community Plan

In addition to the provisions of the City's General Plan Elements, development in the land use study area is governed by the goals, objectives and policies of the OMCP. Adopted in 1981, the OMCP designates the majority of land in Otay Mesa for industrial uses (see Figure 3.2-3, *Adopted Otay Mesa Community Plan Land Use Designations*). In the eastern area of the OMCP, adjacent to the proposed project, land is exclusively designated for industrial uses, with the exception of Brown Field, which is designated for aviation uses; the existing Otay Mesa POE, which is designated for institutional uses; the areas around the existing POE and adjacent to the southeast corner of Brown Field, which are designated for commercial uses; and two strips of land, one north and east of Brown Field and another south of Airway Road along La Media Road, that are designated as open space. Under the current OMCP, residential uses are restricted to the western portion of the planning area.

The OMCP in general and the Border Crossing section of the Land Use Element, in particular, recognize the importance of the international border and make recommendations for improved border crossing, including provision of public facilities to accommodate development and commercial and industrial inter-cooperation with Mexico.

The OMCP is in the process of being updated. In the currently adopted OMCP, the designated land uses abutting the eastern portion of the SR-905 R/W are Industrial Parks and Specialized Commercial (City of San Diego 2009). Under the two scenarios currently under consideration in the OCMP update process (Scenarios 3b and 4B), the areas adjacent to the proposed project modifications to SR-905 would be designated Light Industrial; Heavy Commercial; International Business and Trade; Community Village (30 to 45 dwelling units (DU) per acre; Business Park – Office Permitted; Institutional; Open Space; and, depending on the scenario, Business Park – Residential Permitted (15 to 60 DU per acre) or Visitor Commercial.

### 3.2.2 Environmental Consequences

The consistency of the project alternatives with state, regional and local plans is discussed below, and summarized in Table 3.2-1, at the end of this section.

**Build Alternatives**

Consistency with the Border Master Plan

Because the Border Master Plan ranks the Otay Mesa East/Otay II POEs (and associated infrastructure) is the highest priority border project in the California-Baja California region, implementation of any of the build alternatives would be consistent with the Border Master Plan and its focus on current and projected POE travel demand, cross-border trade, congestion at POEs and transportation facilities, cost effectiveness, project performance, project readiness, and regional benefit.

Consistency with the Transportation and Border Elements of the Regional Comprehensive Plan for the San Diego Region

Implementation of any of the build alternatives would contribute to implementation of the goals presented in the RCP and key policy objectives of its Transportation Element. Vehicles and pedestrians would receive an additional border crossing option, and would be subjected to shorter wait times at the new POE than are currently experienced at the existing POEs. Delays for other vehicles and pedestrians who

choose to cross the U.S. - Mexico international border at the San Ysidro or Otay Mesa POEs instead of the new POE also would be reduced with implementation of any of the build alternatives, due to diversion of congestion away from these existing POEs. In this way, the build alternatives would increase the range of convenient, efficient, and safe travel choices available, and improve overall mobility in the region. The build alternatives, which include the accommodation of transit needs, are designed to improve the connectivity of different transportation modes, facilitate equitable and accessible transportation services, and distribute the potential benefits and burdens of the project in an equitable manner. Accordingly, the build alternatives would be consistent with the Transportation Element of the RCP.

By reducing border wait times, the build alternatives would also promote increased collaborative economic development and transportation strategies; encourage better job accessibility; address international commute patterns; ensure an efficient flow of people and goods across the border; reduce binational commuting times; ensure protection of residents and infrastructure; and balance the implementation of homeland security measures with efficient cross-border and interregional travel and economic prosperity. Accordingly, the build alternatives would be consistent with the Border Element of the RCP.

Consistency with the Regional Transportation Plan

As previously stated, the 2030 RTP (SANDAG 2007a) includes the proposed project in its Revenue Constrained scenario. Consistent with key policy objectives of the RTP, any of the build alternatives would increase inspection processing capacities, and reduce queues and wait times at the existing POEs, thereby improving the mobility of goods and people, and would positively impact the reliability and safety of the overall regional transportation system. At the same time, the build alternatives would help improve the efficiency of the existing and future transportation system by reducing the border bottleneck at existing POEs, while minimizing effects on the environment. In summary, the implementation of any of the build alternatives would improve the efficiency, reliability, and sustainability of border crossing activities in the region.

As discussed in the project Tier II *Natural Environment Study* (NES), the build alternatives have been designed to avoid, minimize or mitigate effects on biological resources and the surrounding community. The SR-11 project is included in all three revenue scenarios of SANDAG's November 2007 RTP as a four-lane toll facility. The SR-905 project is included in all three revenue scenarios of the 2007 RTP as either a six- or eight-lane facility. The proposed project, including the proposed modifications to SR-905, would be consistent with the RTP. The Otay Mesa East POE and SR-11 are considered a top priority of the RTP Goods Movement Action Plan (SANDAG 2007a). Therefore, the build alternatives would be consistent with the RTP.

Consistency with the Regional Transportation Improvement Program

As discussed above in Section 3.2.1, *Affected Environment*, SR-11 and the POE are included conceptually in the adopted SANDAG RTIP. Inclusion of the proposed project's components in the RTIP ensures the implementation of the transportation system improvement priorities as outlined in the RTP. A difference currently exists, however, between the project description in the 2008 RTIP and the project as proposed. An amendment currently in process to the 2010 RTIP is expected to clearly identify the limits of work to reflect both proposed SR-11 and the proposed project's modifications to SR-905 between the SR-905/SR-125/SR-11 interchange and Britannia Boulevard to accommodate the connection of SR-905 to SR-11 via proposed auxiliary lanes. In addition, the 2008 RTIP incorrectly identifies SR-11 as a freeway, although the regional emissions model correctly modeled SR-11 as a toll highway. This description will be revised in a proposed amendment to the 2010 RTIP, expected to have a federal conformity determination in February of 2011. Prior to final NEPA action, the 2010 RTIP, regional conformity analysis, and the project will all have consistent descriptions regarding the toll highway designation and the limits of work,

and will therefore meet conformity requirements. With the inclusion of these elements in the February 2011 amendment to the 2010 RTIP, any of the project build alternatives would be consistent with the RTIP.

Consistency with the MSCP, County BMO and County RPO

As addressed in the project Tier II NES, implementation of any of the build alternatives would impact biological resources protected under the NCCP/MSCP. As noted above in Section 3.2.1, Natural Community Conservation Planning Program/Multiple Species Conservation Program, Caltrans is not an enrolled agency under the MSCP, and implementation of the build alternatives would not require local agency approval, but Caltrans does strive to be consistent with the MSCP and other local plans. Under any of the build alternatives, Caltrans would work with the resource agencies to include acceptable measures to avoid, minimize or mitigate impacts to biological resources protected under the MSCP, County BMO and County RPO.

Consistency with the Complete Streets Policies of the U.S., California, Caltrans, and the City

SR-11 would accommodate commercial, personal and transit vehicles. Pedestrians and cyclists would be accommodated at the POE, as well as at the over- and undercrossings with local surface streets. Parking areas would be provided at the POE to allow cyclists or pedestrians to be picked up or dropped off safely. Additionally, proposed improvements include reservation of space for potential development of a future transit center to encourage use of diversified transportation modes. The build alternatives would therefore be in compliance with the objectives of all applicable complete streets policies.

Consistency with the County General Plan, the Otay Subregional Plan and the East Otay Mesa Specific Plan

Facilities included in the build alternatives are contemplated in the County General Plan, OSP and EOMSP. The most recent amendment to the EOMSP shows an SR-11 alignment that closely approximates the build alternatives; as a result, any of the build alternatives would be largely consistent with the County General Plan, OSP and EOMSP. It is noted, however, that changes in the EOMSP Circulation Element would be needed to accommodate the following aspects of the proposed project design under the various project alternatives:

- Because the Circulation Element currently shows SR-11 as including interchanges at Enrico Fermi Drive and Siempre Viva Road, the One and No Interchange Alternatives would require adjustments to the Circulation Element assumptions for SR-11, as well as the current circulation and land use planning assumptions used for the active tentative maps in the EOMSP (refer to Figure 3.2-2a). In addition, the Circulation Element identified a full interchange at Siempre Viva Road, which would only be implemented by the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative.

- As presented in Figure 2-2, adjustments to the Circulation Element alignments of future Siempre Viva Road, Airway Road, Lonestar Road and Roque Road would be required to accommodate the proposed project.

The 2002 amendment to the EOMSP, which divided the plan area into two subareas, includes the following text: “If a future third border crossing is established, the East Otay Mesa circulation system would need to be re-evaluated.” It also notes that: “If the appropriate federal government agencies approve the siting of an additional international border crossing in the East Otay Mesa Specific Plan Area, the Specific Plan shall be reviewed by the County to ensure Specific Plan compatibility and consistency with the proposed location. Although the location of this facility was analyzed in detail during

preparation of the Specific Plan, it is recognized that a future amendment of the East Otay Mesa Specific Plan may be required to accommodate this facility in light of any changed circumstances. Land uses and planned transportation facilities in the Specific Plan shall be reviewed if the additional border crossing is approved to determine any necessary changes to the Specific Plan" (County 2002).

The 2008 amendment to the EOMSP also notes that the proposed corridor alignment for SR-11 depicted on the Circulation Element is subject to change upon the completion of Caltrans Environmental Studies (County 2008b).

Given the language in the EOMSP recognizing the likely need for Circulation Plan adjustments to accommodate SR-11 and the new POE, the build alternatives would be consistent with the County General Plan, Otay Subregional Plan and EOMSP.

Consistency with the Mobility and Economic Prosperity Elements of the City of San Diego General Plan and the Otay Mesa Community Plan

SR-11 is included conceptually in the current City OMCP and, by extension, the City General Plan. The build alternatives would not conflict with the intended industrial development of the area as designated in the OMCP. It would, furthermore, be consistent with the goals and objectives of keeping pace with the rate and demands of development while promoting "commercial and industrial inter-cooperation" with Mexico, as specified in the City OMCP.

The build alternatives would be consistent with applicable policies contained in the Mobility and Economic Prosperity Elements of the General Plan (listed above under *Affected Environment*). As promoted in the Mobility Element, the proposed implementation of a new POE would help provide adequate capacity and reduce congestion for cross-border transportation; be designed to facilitate safe and accessible multi-modal transportation through provision of a pedestrian crossing, bicycle facilities and a transit center site; and promote the efficient use of the City's existing transportation network. In particular, the build alternatives are expected to relieve pressure on existing transit, vehicle and pedestrian movement at the existing POEs.

The Economic Prosperity Element contains a number of policies related to improvements in border crossing efficiency, enhanced linkages, improved border appearance, border security, use of border technology, and international cooperation. Any of the build alternatives would be consistent with these policies; since they would provide an alternative to the existing POEs (thus reducing wait times), would be designed to current urban design standards, would implement state-of-the-art border security programs under the control of CBP and would coordinate with the Mexican authorities for optimum binational cooperation in design and operations.

The build alternatives would therefore be consistent with the Mobility and Economic Prosperity Elements of the City General Plan.

Summary for the Build Alternatives

In summary, the build alternatives would be consistent with all required plans and policies, and no substantial land use plan consistency impacts would occur.

Variations on the Build Alternatives

*No Toll Variation*

The No Toll Variation would be inconsistent with the RTP and the 2010 RTIP, because SR-11 is currently listed in these plans as a toll highway. Implementation of the No Toll Variation would have to be addressed in the RTP and RTIP to assure consistency, but would not alter the conclusions reached for the project build alternatives regarding consistency with all other plans and policies analyzed.

*46-foot Median Variation, SR-905/SR-125/SR-11 Interchange Variations and Siempre Viva Road Full Interchange Variation.*

Implementation of the 46-foot Median Variation or the SR-905/SR-125/SR-11 Interchange design variations or the Siempre Viva Road Full Interchange Variation would not affect the conclusions assessed for the project build alternatives regarding plan consistency.

**No Build Alternative**

Consistency with the Border Master Plan

The No Build Alternative would not be consistent with the Border Master Plan's ranking of the Otay Mesa East/Otay II POEs (and associated infrastructure) as the highest priority border project in the California-Baja California region, and would prevent full implementation of this plan.

Consistency with the Transportation and Border Elements of the Regional Comprehensive Plan for the San Diego Region

The No Build Alternative would not contribute to implementation of the goals presented in the RCP and key policy objectives of its Transportation Element. Neither a reduction in cross-border delay times nor increased connectivity would occur. In this way, the No Build Alternative would not improve overall mobility in the region and; accordingly, it would be inconsistent with the Transportation and Border Elements of the RCP.

Consistency with the Regional Transportation Plan

The No Build Alternative would not implement the goals of the RTP of improving the efficiency, reliability, and sustainability of border crossing activities in the region and would not implement the Revenue Constrained Scenario of the RTP, which specifies the construction of SR-11. The No Build Alternative would therefore not be consistent with the RTP.

Consistency with the Regional Transportation Improvement Program

The No Build Alternative would not implement the goals of the RTP discussed above. Furthermore, this scenario would not be consistent with the 2008 and RTIPs, which anticipate near-term action to implement this program within the time frame of the current RTIP. Therefore, the No Build Alternative would not be consistent with the RTIP.

Consistency with the MSCP, County BMO and County RPO

As no activity or land use changes would occur on the site, implementation of the No Build Alternative would not impact sensitive biological resources that are protected under the MSCP, County BMO and

County RPO. Thus, the No Build Alternative would not conflict with the MSCP, County BMO or County RPO.

Consistency with the Complete Streets Policies of the U.S., Caltrans and the City

As no action would occur on the site, implementation of the No Build Alternative would not result in the construction of transportation facilities subject to Complete Streets policies. Thus, the No Build Alternative would not conflict with federal, state or local Complete Streets policies.

Consistency with the County General Plan, the Otay Subregional Plan and the East Otay Mesa Specific Plan

The No Build Alternative would not implement the facilities assumed in the County General Plan, OSP and EOMSP. As a result, the No Build Alternative would not be consistent with the County General Plan, OSP or EOSMP.

Consistency with the Mobility and Economic Prosperity Elements of the City of San Diego General Plan and the Otay Mesa Community Plan

The No Build Alternative would not advance the goals of the Mobility and Economic Prosperity Elements of the City General Plan. The No Build Alternative would not aid in reducing border congestion, promote the City's transportation network, promote cross-border connectivity, or facilitate cooperation with Mexican authorities for optimum bi-national cooperation of cross-border operations. The No Build Alternative would therefore be inconsistent with the Mobility and Economic Prosperity Elements of the City General Plan.

Summary for the No Build Alternative

In summary, the No Build Alternative would be inconsistent with the Border Master Plan, RCP, RTP, RTIP, County General Plan, OSP, EOMSP, City General Plan, and the OMCP, resulting in a land use plan consistency impact.

Summary of Plan Consistency for All Project Alternatives

The consistency of the proposed project alternatives with state, regional and local plans is summarized in Table 3.2-1, below.

**Table 3.2-1**
**CONSISTENCY OF PROJECT ALTERNATIVES AND VARIATIONS WITH STATE, REGIONAL AND LOCAL PLANS**

| Planning Document | Description | Alternative/Variation | | | |
|---|---|---|---|---|---|
| | | Build | No Toll | Other Variations | No Build |
| Border Master Plan | A binational comprehensive approach to coordinate planning and delivery of projects at land POEs and transportation infrastructure serving those POEs in the California-Baja California region. | C | C | C | I |
| Regional Comprehensive Plan | The strategic planning framework for the San Diego region. Addresses the major elements of planning for the region, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, and border issues. | C | C | C | I |

**Table 3.2-1 (cont.)**
**CONSISTENCY OF PROJECT ALTERNATIVES AND VARIATIONS WITH STATE, REGIONAL AND LOCAL PLANS**

| Planning Document | Description | Alternative/Variation | | | |
|---|---|---|---|---|---|
| | | Build | No Toll | Other Variations | No Build |
| Regional Transportation Plan | The adopted long-range transportation planning document for the San Diego region. Addresses new and improved connections to more efficiently move people and goods throughout the region by providing more convenient, fast and safe travel choices for public transit, ridesharing, walking, biking, private vehicles, and freight. | C | I | C | I |
| Regional Transportation Improvement Program | A five-year capital improvement program for transportation projects that is updated by SANDAG every two years and reflects the region's priorities for short-range transportation system improvements. | C[1] | I | C | I |
| Complete Streets | A series of federal, state and local policies emphasizing the integration of diverse transportation modes to ensure safe access to transportation for users of all ages and abilities. | C | C | C | C |
| Multiple Species Conservation Program | A comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. | C | C | C | C |
| County Biological Mitigation Ordinance | The mechanism by which the County implements the MSCP at the project level. Contains design criteria and mitigation standards that, when applied to projects requiring discretionary permits, protect habitats and species and ensure that a project does not preclude the viability of the MSCP Preserve System. | C | C | C | C |
| County Resource Protection Ordinance | Provides development controls for unique resources within the County deemed to be fragile, irreplaceable and vital to the general welfare of the County's residents. Resources protected by the County include: steep slopes, sensitive habitat lands, wetlands, wetland buffers, floodways, floodplain fringes, and certain prehistoric and historic sites. | C | C | C | C |
| County General Plan | Designates planned land uses that are considered appropriate for each portion of the County. Applicable elements include the Open Space, Regional Land Use, Circulation, Seismic Safety, Conservation, Public Facility, Public Safety, Scenic Highway and Noise elements. | C | C | C | I |
| Otay Subregional Plan | Designates planned land uses in the Otay subregional area. | C | C | C | I |
| East Otay Mesa Specific Plan | Establishes standards for development, environmental conservation, and public facilities to implement objectives of the County Diego General Plan and Otay Mesa Subregional Plan. | C | C | C | I |
| City General Plan | Represents the comprehensive long-term plan for the City's physical development. Applicable elements include the Mobility Element, intended to attain a | C | C | C | I |

**Table 3.2-1 (cont.)**
**CONSISTENCY OF PROJECT ALTERNATIVES AND VARIATIONS WITH STATE, REGIONAL AND LOCAL PLANS**

| Planning Document | Description | Alternative/Variation | | | |
|---|---|---|---|---|---|
| | | Build | No Toll | Other Variations | No Build |
| | balanced, multi-modal transportation network that will accommodate forecast capacity needs and foster economic growth, and the Economic Prosperity Element, intended to support a diverse, innovative, competitive, entrepreneurial, and sustainable local economy. | | | | |
| Otay Mesa Community Plan | Designates land uses and includes goals for future development, including industrial and commercial activity and international cooperation. | C | C | C | I |

C = Consistent; I = Inconsistent
[1] Based on inclusion of project improvements to SR-905 in the February 2011 amendment to the 2010 RTIP, which is currently in process, prior to project approval.

### 3.2.3 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives**

No substantial land use plan consistency impacts are anticipated under the project build alternatives, assuming inclusion of proposed modifications of the SR-905 project in the February 2011 amendment to the 2010 RTIP, which is currently in process, prior to project approval. The No Toll Variation would present an inconsistency with the RTP and RTIP, and would have to be addressed in a future RTIP amendment to assure consistency, but would not alter the conclusions assessed for the project build alternatives regarding consistency with all other plans and policies analyzed. No avoidance, minimization or mitigation measures are proposed for the build alternatives. Potential measures to address impacts to protected resources under the NCCP/MSCP are discussed in Sections 3.19 through 3.24.

**No Build Alternative**

Although the No Build Alternative would be inconsistent with several applicable plans and policies, no action would occur. No associated avoidance, minimization or mitigation measures would be required.

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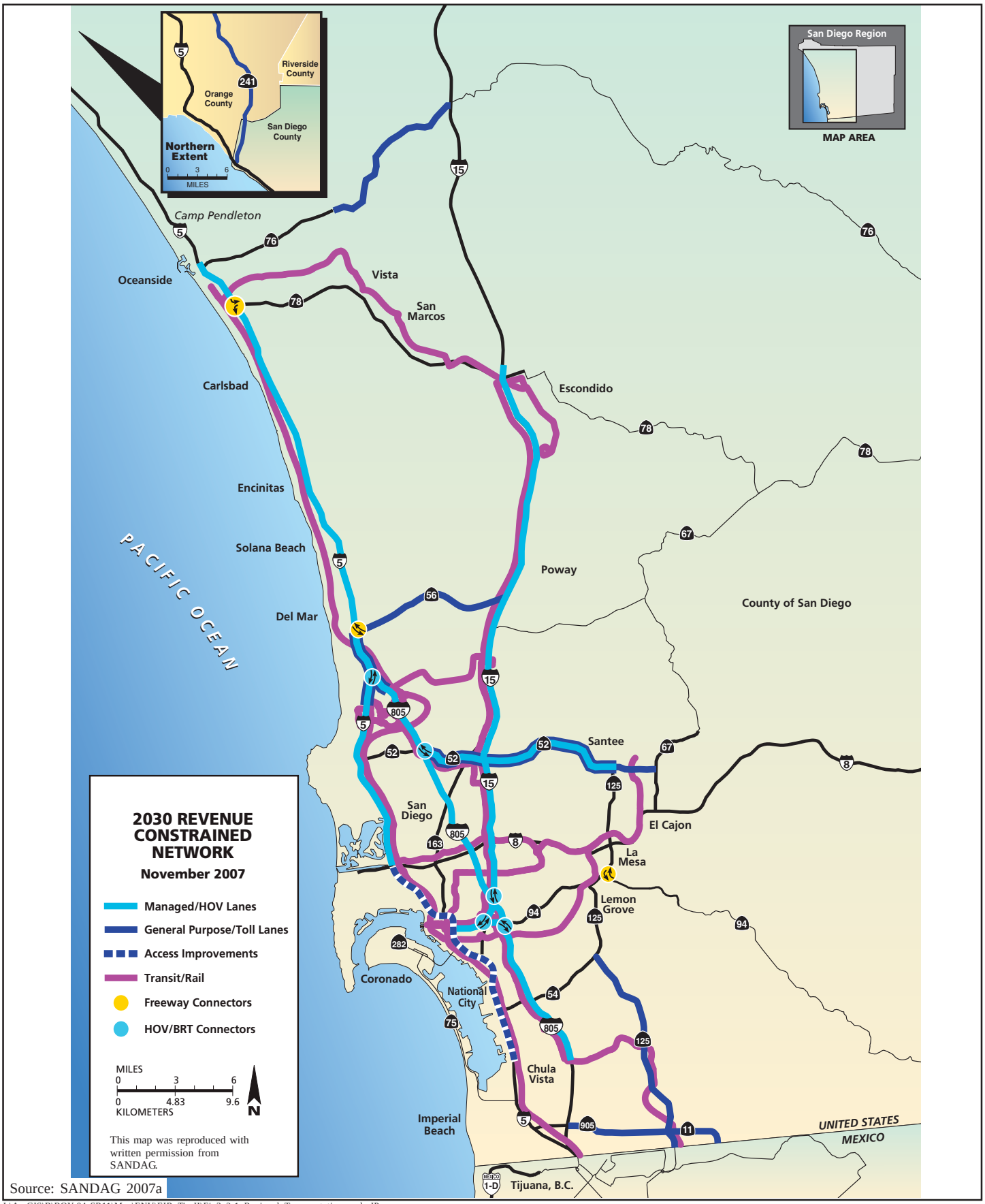


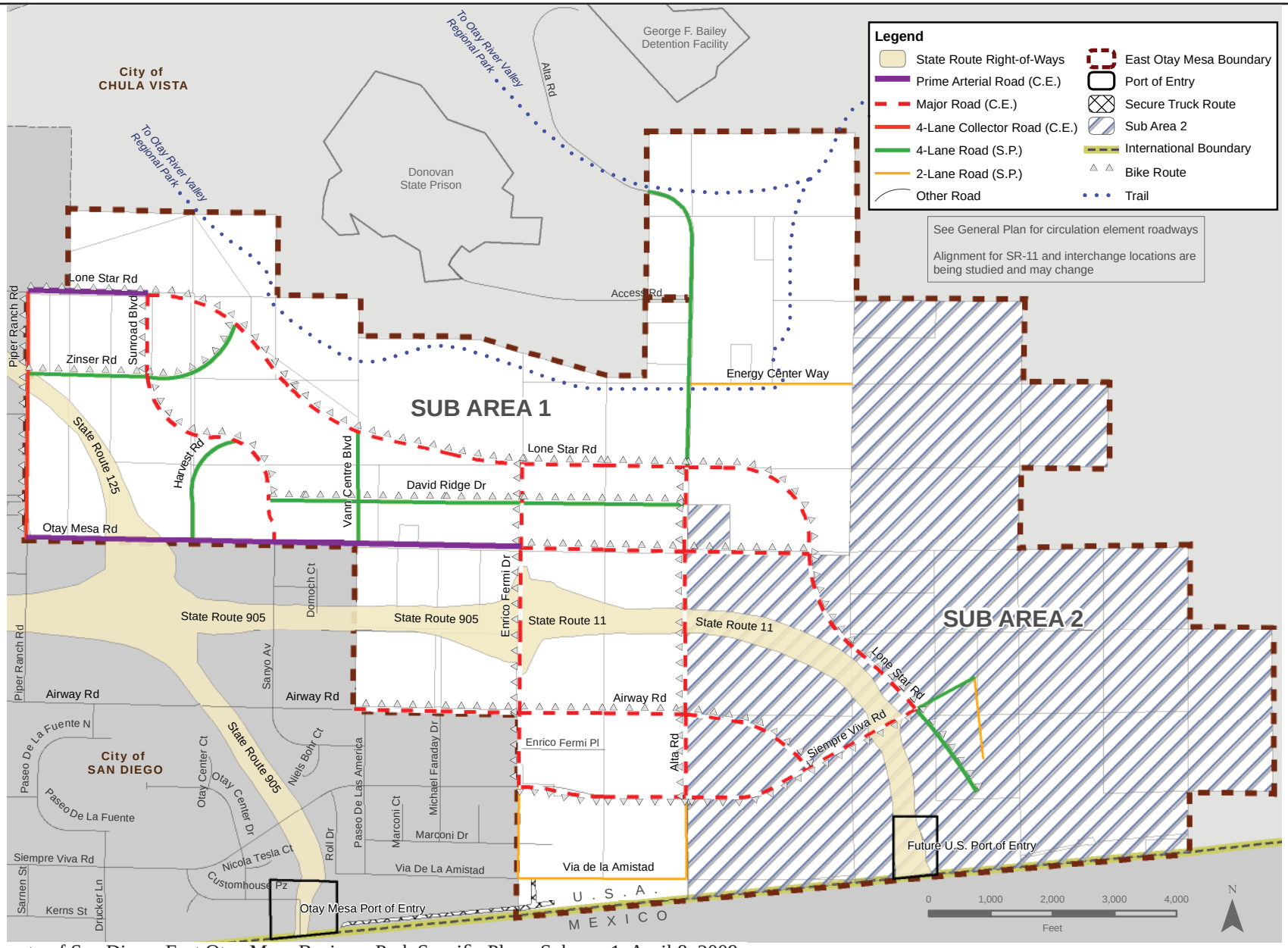

Source: SANDAG 2007a

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_2-1_Regional_Transportation.pmd -JP

# Regional Transportation Plan 2030 Revenue Constrained Network

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.2-1



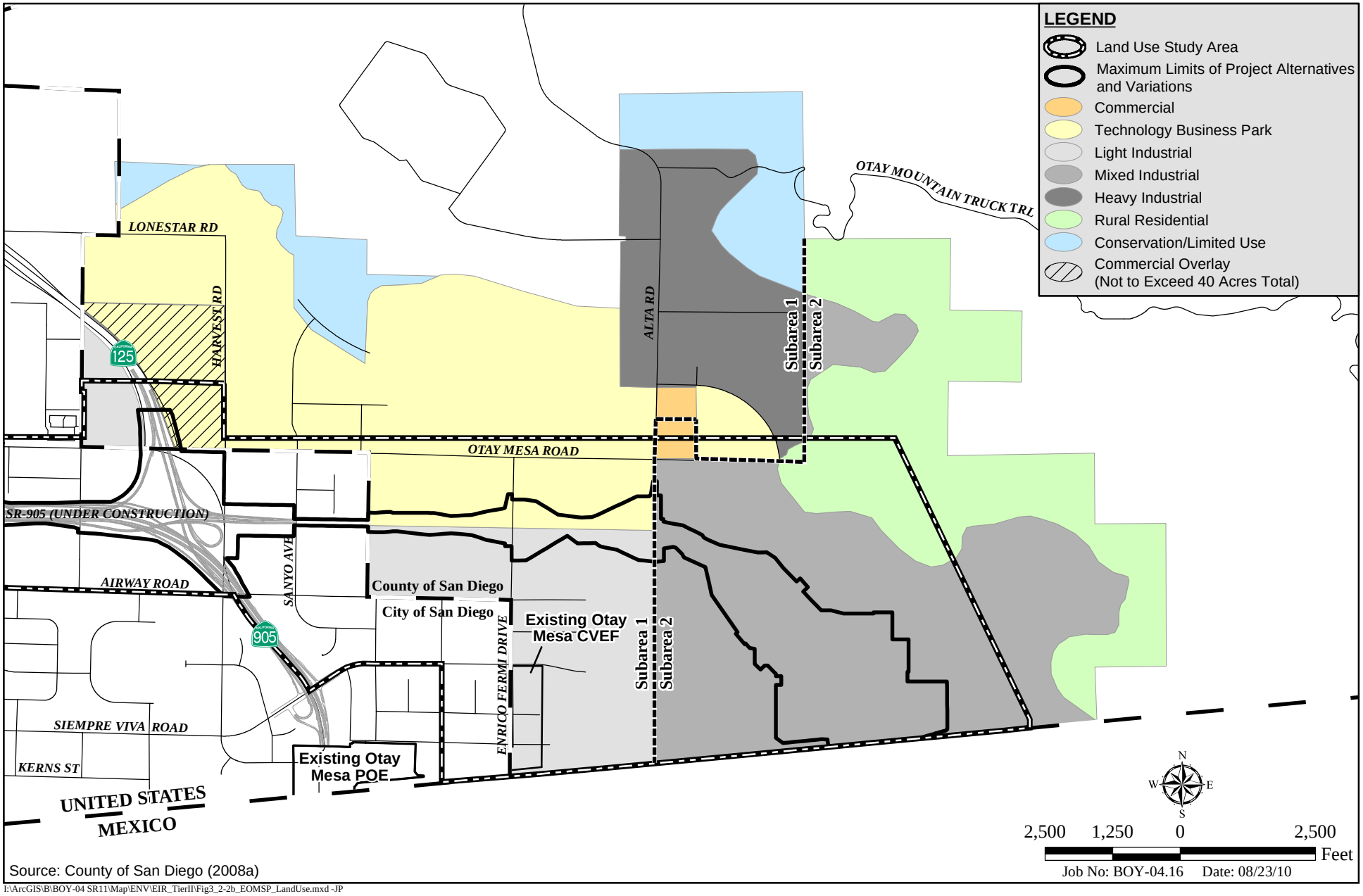

Source: County of San Diego, East Otay Mesa Business Park Specific Plan - Subarea 1, April 8, 2009

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_2-2a_EOMSP_Circulation.indd -JP

# East Otay Mesa Specific Plan Circulation Plan Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.2-2a

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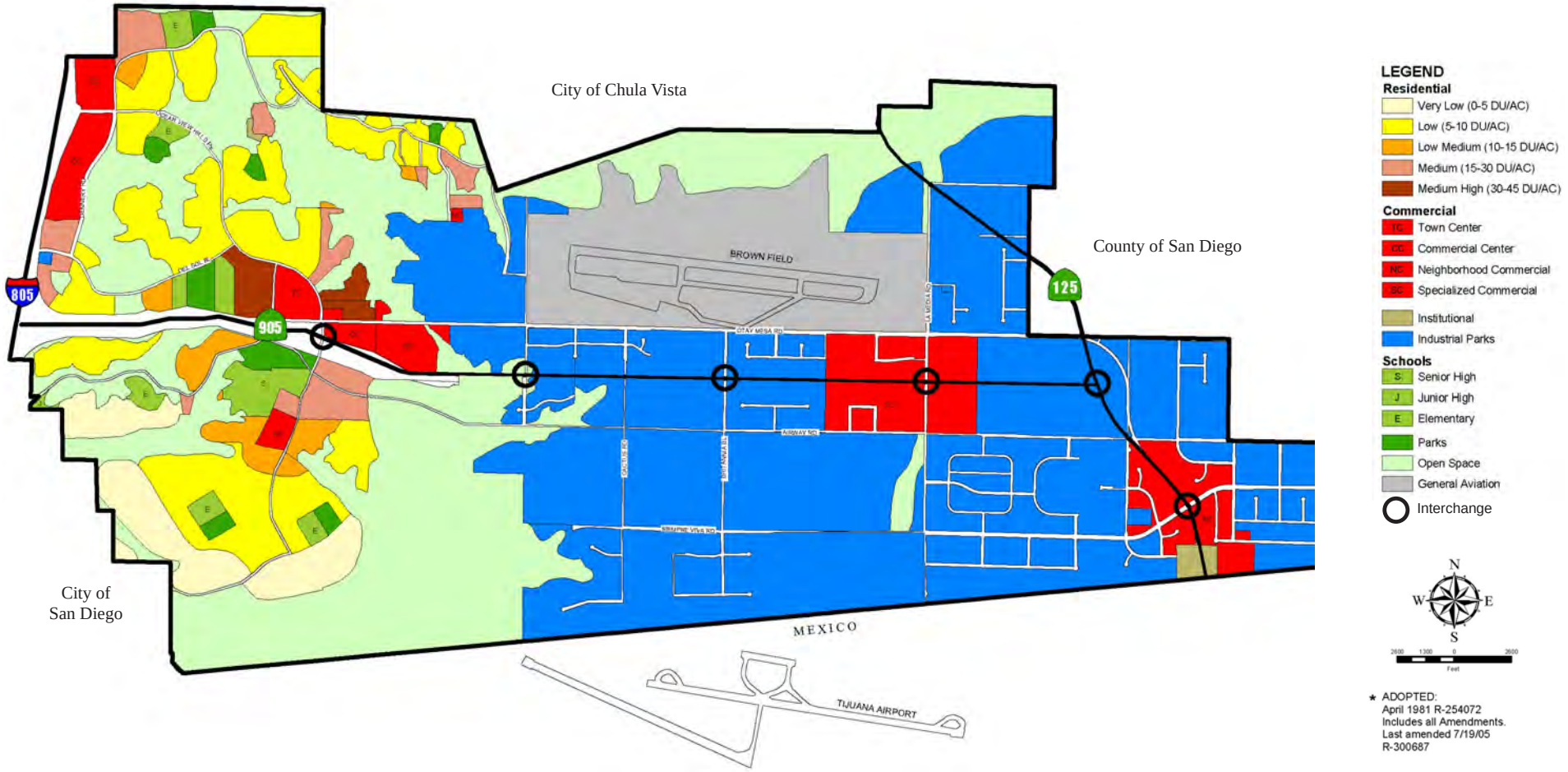
# East Otay Mesa Specific Plan Land Use Designations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.2-2b




Source: City of San Diego (2005)

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_2-3_Community_Plan.indd -JP

# Adopted Otay Mesa Community Plan Land Use Designations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.2-3

# 3.3 GROWTH

Transportation networks are one of many factors that influence where, when, and what type of development takes place in an area. Other factors include population and economic growth, desirability of certain locations, the costs and availability of developable land, physical and regulatory constraints, and the costs of sewer and water services.

Although transportation can influence growth, growth can also influence transportation. While transportation projects play a role in land use changes by providing infrastructure that can improve mobility or open access to new locations, the converse may also be true: new land development may generate travel to that location which, in turn, generates the need for new transportation facilities. Most capacity-increasing highway projects are proposed in response to traffic congestion that results from current or anticipated growth, rather than attracting new growth to an area that otherwise would remain stable or decline in population. However, transportation projects can affect the type, location, amount or rate of growth in an area, most often indirectly, due to changes in travel time and increased land accessibility in areas that may be ripe for development.

This section assesses the likelihood that the proposed project would result in indirect impacts related to growth. The analysis concentrates on the identification of the reasonably foreseeable growth with or without the project; to what extent the project would influence the overall amount, type, location, or timing of that growth; and whether project-related growth could be expected to put pressure on or cause impacts to environmental resources of concern (Caltrans 2006a). The analysis focuses on potential growth in the land use study area (refer to Figure 3.1-1), with additional consideration of the socioeconomic study area, which is defined as Census Tract (CT) 100.15 and covers the majority of the EOMSP and OMCP areas (refer to Figure 3.3-1, *Socioeconomic Study Area: Census Tract 100.15*), as well as for the larger southern California region, due to the potentially wider socioeconomic effects associated with implementation of a POE.

## 3.3.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 CFR [Code of Federal Regulations] 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

CEQA also requires the analysis of a project's potential to induce growth. CEQA guidelines [Section 15126.2(d)] require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

## 3.3.2 Affected Environment

As described in Section 3.1, *Existing and Future Land Use*, the land use study area currently is largely undeveloped, but potentially on the brink of major development. The County and City designate virtually the entire land use study area for industrial and technology business uses (with the exception of small areas for commercial and rural residential use). The County and City have numerous active development applications within and adjacent to the land use study area, as listed in Table 3.1-1.

As illustrated in Table 3.3-1, population, housing units, and employment within the socioeconomic study area (CT 100.15) and for the San Diego region are forecast by SANDAG to the year 2030, based on the year 2000. The socioeconomic study area is expected to experience rapid growth during the forecast period relative to San Diego County and the U.S. This census tract has a large stock of vacant land, and can absorb more housing units and residents. The total number of residents in the project area has been forecast by SANDAG to grow almost 20 fold from 1,062 people in 2000 to 21,691 people in 2030. This is substantially higher than the expected growth for the County (42 percent) and the U.S. (33 percent).

The total number of housing units in CT 100.15 has been forecast by SANDAG to grow 1,992 percent from 248 units in 2000 to 5,189 units in 2030. Housing units within the local area are expected to grow at a rate that is very similar to the rate of growth in population As the other cities in the more central region of San Diego County fill up under their current land use plans, a larger share of the growth will be directed into the North County and South Bay areas. The total employment in the socioeconomic study area was forecast by SANDAG to significantly increase from 341 employees in 2000 to 28,109 employees in 2030. The high growth rate for the local area is due to the amount of vacant land that is planned for employment use and is expected to develop during the forecast period.

**Table 3.3-1**
**GROWTH FORECASTS FOR POPULATION, HOUSING, AND EMPLOYMENT**

| Geographic Area/ Economic Forecast Category | 2000 | 2010 | 2030 |
|---|---|---|---|
| **CT 100.15** | | | |
| Total Population | 1,062 | 2,147 | 21,691 |
| Total Housing Units | 248 | 533 | 13,686 |
| Total Employment | 341 | 13,686 | 28,109 |
| **San Diego County** | | | |
| Total Population | 2,813,833 | 3,245,279 | 3,984,753 |
| Total Housing Units | 1,040,149 | 1,174,180 | 1,383,803 |
| Total Employment | 1,232,739 | 1,573,742 | 1,913,682 |
| **United States** | | | |
| Total Population | 281,421,906 | 310,233,000 | 373,504,000 |
| Total Housing Units | 115,904,641 | 127,771,000 | 155,312,000 |
| Total Employment | 129,721,512 | 143,002,000 | 169,935,000 |

Sources: SANDAG (2006a)
U.S. Department of Commerce, Bureau of the Census (2004)

### 3.3.3 Environmental Consequences

This section assesses the likelihood that the proposed project would result in indirect impacts related to growth in the land use study area or in the larger socioeconomic study area. This assessment examines the type of transportation project, type of project location (e.g., urban, suburban or rural), changes in accessibility, and growth pressure, as factors influencing the likelihood of growth inducement and consequent growth-related impacts.

**First-cut Analysis of Growth Effects of the Proposed Project**

Caltrans and FHWA guidance indicate the need for a first-cut analysis of the project to determine the likelihood of growth-related impacts. This analysis should use readily available information to examine a variety of interrelated factors to answer the following questions (Caltrans 2007c):

1. To what extent would travel times, travel cost, or accessibility to employment, commercial activities, or other destinations be changed, and would such a change affect the attractiveness of some areas for development, or trip patterns, or travel behavior?

2. To what extent would change in accessibility affect the location, rate, type, or amount of growth or land use change in the area?

3. To what extent would this growth or land use change affect resources of concern?

Key factors to examine in answering these questions are project type, project location, accessibility, and growth pressure.

The guidance indicates that for the first-cut screening, the potential for growth-influencing impacts of the proposed project should be examined within a wide geographic area. Alternative design/operational characteristics of SR-11 and the new POE could affect demand and operations at the existing POEs. In addition, implementation of SR-11 and the Otay Mesa East POE would increase the capacity for transport of people, goods, and services across the border in both directions. The area selected for the analysis of growth-influencing impacts is the socioeconomic study area (i.e., CT 100.15; refer to Figure 3.3-1), which includes the existing Otay Mesa and San Ysidro POEs as well as the area in the vicinity of the project.

Project Type

Certain transportation project types, such as widening existing lanes or repairing storm damage, are unlikely to cause growth-related impacts. Other types of projects, such as construction of new highways, may have more potential for such impacts. Typically, projects that create a new facility or new access require an analysis of growth-related impacts. The proposed project would provide a new border crossing facility and a new regional transportation facility with various access points to local roads that depend on the alternative selected for implementation. In terms of project type, the proposed project would appear to require a full analysis of growth-related impacts.

The destination for SR-11, however, is predominantly the new POE. Local access points would be limited and would vary with the different alternatives. The Two Interchange Alternative would increase access to the greatest degree (at Enrico Fermi Drive and a proposed extension of Siempre Viva Road as well as the new POE); the One Interchange Alternative would only increase access at Alta Road and the new POE; and the No Interchange Alternative would not provide any local access points in addition to the new POE. These roadways and the development planned or occurring around them are already accessible via other local roads or would be accessible via future County Circulation Element roads to be built by others independently of the proposed project. Furthermore, the toll would likely discourage use of SR-11 for local trips. Therefore, the ability of the proposed project to increase access and thereby influence growth in the East Otay Mesa area beyond what is already planned or in progress is limited.

As discussed in Section 1.2.2, Need for the Project, demand for crossing the border for personal trips and for goods movement has outstripped the capacities of the existing POEs within the past decade. This situation causes a barrier to trade and job growth in the region, beyond the East Otay Mesa planning area.

Therefore it is expected that the addition of POE capacity at the border would result in increased trade and increased jobs in the southern California region (beyond the immediate socioeconomic study area for the project) by removing a current obstacle to this growth. The precise locations or characteristics of such growth are well beyond the scope of this EIR/EIS; any predictions would be highly speculative and inappropriate for the NEPA process.

Project Location

Another important screening factor is project location, that is, whether a project is located in an urban, suburban, urban/suburban fringe, or rural area. Much of the proposed project would be located on undeveloped parcels adjacent to an expanding urban/suburban area, where there is generally high land availability and lower land prices. Transportation projects in these types of areas typically have a relatively high potential to cause growth-related impacts, particularly if the land is suitable, development regulations are favorable, and the area is in the path of an expanding urban/suburban core. Because the proposed facilities are located in a prime growth area, an analysis of growth-related impacts would appear to be required.

As shown in Table 3.3-1 and discussed in more detail in Section 4.10 of the CIA (HELIX/CIC Research 2010), however, rapid growth in the Otay Mesa area is anticipated and planned for by local and regional planning agencies, regardless of the proposed project. The socioeconomic study area (CT 100.15) is expected to experience a 19-fold increase in population from 1,062 in 2000 to 21,691 in 2030, compared with an approximately 42 percent increase over the same period for the San Diego region as a whole. Most of this residential growth is anticipated to occur in the western part of the census tract, distant from the proposed project, but would be supported by the industrial and business growth predicted in eastern sections, including the area in the vicinity of the project.

Planned growth in the socioeconomic study area has taken the proposed facilities and their approximate location into consideration for many years, as evidenced by provisions for SR-11 and/or the Otay Mesa East POE in many of the planning documents discussed previously (such as the County and City General Plans, the EOMSP and OMCP, and SANDAG RCP, RTP and RTIP). The County of San Diego has recently updated the EOMSP, which designates virtually the entire area in the vicinity of the project for industrial and technology business uses (with the exception of small areas for commercial and rural residential use). The County and City have numerous active development applications within and adjacent to the land use study area, as listed in Table 3.1-1, and shown on Figure 3.27-2, *Anticipated Cumulative Development within the Project Vicinity*. The EOMSP identifies a conceptual SR-11 corridor and POE site approximating the proposed project. The projects that are developing in the East Otay Mesa area, however, are being justified by their proponents in terms of land availability and appropriate zoning for industrial purposes, not in terms of the future potential for SR-11 and the new POE. Therefore, although the construction and operation of the proposed facilities would take place in an environment poised for rapid growth, this is growth that is anticipated and planned for by local and regional planning agencies. It is also growth that is already in progress independently of the proposed project.

A February 2011 RTIP amendment is being processed to reflect the addition of one lane to SR-905 between the SR-905/SR-125/SR-11 interchange and Britannia Boulevard, as necessary to accommodate the connection of SR-905 with SR-11. The addition of one lane for this 2.1-mile segment of SR-905 would not cause unplanned growth because the freeway would remain constrained to six lanes west of Britannia Boulevard, and the capacity of the SR-905 freeway overall would remain unchanged. The purpose of the additional lane is to accommodate merging and weaving associated with the SR-11 connectors and other previously approved merging lanes; it is not proposed for the purpose of increasing the capacity of SR-905.

Accessibility

Accessibility reflects both the attractiveness of potential destinations and ease of reaching them, which, in turn, are related to land use and circulation issues. Currently, the area in the vicinity of SR-11 and the POE has few developed roads and limited accessibility. The implementation of SR-11 and the Otay Mesa East POE could affect ultimate circulation and land use patterns and the resulting accessibility of the socioeconomic study area in terms of travel times, travel behavior and other aspects of accessibility. Traffic forecasts indicate that in the future, more and more vehicles would cross the border at the existing POEs without the proposed new POE. In this regard, the proposed project could change the number of trips experienced at specific locations, travel speeds and travel times, congestion and level of service, and accessibility to, from, and within the socioeconomic study area. Therefore, an analysis of growth-related impacts would appear to be required.

The project traffic study assumes that future overall projected traffic and border crossing demand in the socioeconomic study area would be the same with or without the proposed project. Although there would be a redistribution of traffic from local roads to SR-11, and thus the potential for reduced congestion on local roads with the project, most local roads are projected to operate at acceptable levels of service with or without the project, and options for avoiding, minimizing or mitigating traffic impacts are available for those roadways or intersections that would experience unacceptable levels of service. Therefore, speeds, travel times, congestion and level of service would not be expected to change sufficiently with the project to substantially change the growth that is planned and already in progress. In addition, as discussed above, local development projects planned or in progress are already accessible from roads other than SR-11 or would be accessible from future Circulation Element roads to be built by others independently of the proposed project.

Growth Pressure

The Otay Mesa area contains the largest quantity of remaining undeveloped industrial land within San Diego County. Land values in the Otay Mesa area remain relatively inexpensive, compared with remaining industrial infill parcels in other areas of the County. Furthermore, the land on Otay Mesa has the unique advantage of facilitating access to the existing Otay Mesa POE. In terms of growth pressure, the area in the vicinity of the project is experiencing proposed or ongoing construction activity and encompasses tracts of undeveloped land, indicating a high opportunity for growth. The recent downturn in the San Diego real estate market, which is tied to the overall economic recession at the national level, is temporarily reducing this pressure, but over the longer term, a return to growth pressure is expected. Overall, growth pressure in the area indicates that an analysis of growth-related impacts may be required.

Growth in the regional study area is physically constrained, however, by the Otay River Valley to the north, the San Ysidro Mountains to the east, the international border to the south, and existing development to the west of I-805. Although much of the area in the vicinity of the project is undeveloped land at the present time, there are numerous active development proposals that will likely proceed with or without SR-11 and a new POE. In fact, nearly every developable parcel in the land use study area is already the subject of a development proposal, which makes it unlikely that substantial additional growth stimulation would occur as a result of the project.

It is also unlikely that the proposed project would influence the rate and timing of development within the EOMSP area by stimulating such development to occur sooner or more quickly. Most of the developments have already filed their applications with the County and City, so are already in process. The type of development could be affected through the encouragement of more industrial uses related to cross border trade; however, this effect would likely be minor because of the similar influence of the existing Otay Mesa POE. While the pattern of development could be influenced in the immediate vicinity

of the proposed facilities, in order to accommodate the preferred SR-11 and new POE, planned growth has taken the proposed facilities and their approximate location into consideration for many years, as discussed above. Furthermore, without a new POE and SR-11, the proposed industrial developments could still support maquiladora and other international trade-related businesses that would use the Otay Mesa and/or Tecate POEs.

The proposed addition of another POE between the U.S. and Mexico has the potential to influence growth throughout the southern California region. The constraint to cross border trade and job growth within San Diego County that is caused by the current shortage of capacity at the existing POEs in San Diego County is well documented by SANDAG (see Section 1.2.2). The proposed project, along with other cumulative POE enhancing projects along the U.S./Mexico border, would alleviate the current barrier to such growth, potentially providing one stimulus for growth throughout southern California and particularly in San Diego County. Such growth would be expected to occur slowly, as the recent economic recession recedes and manufacturing levels increase. The recession has also presented an obstacle to economic growth in recent years. Due to the recession, office vacancy rates in San Diego, Orange and Los Angeles counties have increased substantially and were measured at about 50 percent in 2009. Over the short-term following the recession, the available capacity in office and manufacturing space would be expected to be filled prior to substantial demand for new growth occurring. The specific areas in which growth would occur would be speculative to predict.

**Preliminary Conclusions Regarding Growth Influence**

As discussed above in the first-cut screening for each issue, unique conditions of the socioeconomic study area determine that the potential for the proposed project to influence growth and growth-related impacts within the defined socioeconomic study area is not substantial because most of the area is either already developed, addressed in current development proposals before the County, or is restricted from development within the local plan due to topography, sensitivity of biological resources and other constraints. Therefore, localized impacts are likely to be less than one might expect for a project consisting of a new highway and POE on undeveloped parcels adjacent to an expanding urban/suburban area with limited existing accessibility and substantial growth pressure. Within the wider southern California region, however, the alleviation of a current "bottleneck" that has been widely acknowledged to restrict growth within the region, could influence growth in the manufacturing sector and indirectly influence the demand for housing as well. This growth would be expected occur gradually as the manufacturing sector recovers from the recent recession. The expected growth-related impacts under each project alternative are presented below.

Build Alternatives

The build alternatives can be seen as both responding to and facilitating planned growth. Overall, consideration of factors such as type of transportation project, urban/suburban/rural project location, changes in accessibility, and growth pressure lead to the conclusion that there is little potential for growth influence and consequent growth-related impacts within the defined socioeconomic study area, as a result of any of the three build alternatives. Travel times, travel cost, accessibility to employment, commercial activities, destinations, trip patterns, travel behavior, and the attractiveness of specific areas for development would not be likely to change sufficiently as a result of the proposed project to change the growth that is planned and already in progress. Development would not occur sooner or at a more rapid pace because most of the area in the vicinity of the project is already the subject of active development applications in progress with the County and City. In addition, the pattern of development would be expected to easily adjust to accommodate the project limits, because these facilities have been indicated conceptually on planning documents for many years, and currently reflect the approximate location of the proposed project. Furthermore, growth that is planned or already in progress in the vicinity of the project

would not be expected to result in unanticipated impacts to resources. Any associated development would be in accordance with the EOMSP and OMCP, and would have to conform to CEQA and local, state and federal regulatory requirements for the protection of resources. No substantial impacts related to growth influence would be expected to result from implementation of the build alternatives.

Growth influence within the larger southern California region would be the same for any of the three build alternatives. One of the stated purposes of the project is to accommodate projected increases in international trade and personal cross-border travel. The stated need for the project, as described in Section 1.2.2, is substantially supported by a documented increase in cross border trade and personal travel across the border that have occurred over the past decade, which have substantially increased wait times at the border. Due to the increased wait times and inadequate capacity at the existing POEs, SANDAG estimated that over 50,000 jobs and $6 billion in gross output of products and services were being sacrificed in the region in 2005. Although these numbers have likely declined during the recession, wait times have remained excessive and are likely to increase once again, as the recent recession continues to abate. The alleviation of the current border "bottleneck" is therefore expected to influence growth in manufacturing and services throughout the southern California region, with this influence increasing as the economy improves. An additional cumulative growth influence is also anticipated based on implementation of the proposed project in conjunction with the previously approved expansion of the San Ysidro POE and the proposed expansion of the Otay Mesa POE. The specific areas in which growth would occur would be too speculative to predict. Office vacancy rates in San Diego, Orange and Los Angeles counties were all at about 50 percent in 2009.[1] Thus, it is expected that growth regionwide would utilize the available space initially, with the full effects of project growth influence more likely to be felt over the long term. To the extent that the project would influence more rapid economic growth within the region, it would be seen as benefiting the local economy by generating much needed jobs and helping to fill vacant office and industrial space. In the near term, environmental effects would be unlikely to exceed the planned impacts of the existing development capacity within the region that would be utilized to support the near term growth. Over the long term, the growth associated with the proposed POE and increased capacity for border crossings could increase pressure for development in southern California. Such development would be subject to environmental review under state and local laws and regulations and would be managed according to the general plans and zoning restrictions for each jurisdiction. On balance, the project level and cumulative growth effects of the proposed POE are considered to be positive.

Variations on the Build Alternatives

*No Toll Variation*

The imposition of a toll would likely discourage use of SR-11 for local trips, and may reduce the attractiveness of SR-11 and the Otay Mesa East POE for commercial crossers, since the wait times would likely be similar to those at the Otay Mesa POE. Thus, the No Toll Variation would be expected to result in marginally increased access to the area surrounding the proposed project for non-commercial travelers, but decrease the use of the project by commercial vehicles. The net effect could be a slight reduction in economic growth within the region compared to the build alternatives with a toll. Existing and planned development, as well as Circulation Element roads to be built by others independently of the proposed project, already make the area accessible for development. The marginal ability of the No Toll Variation to increase access and thereby influence growth beyond what is already planned or in progress within the immediate socioeconomic study area is limited. In addition, this variation would not be expected to substantially influence growth on a regionwide basis, beyond the effects identified for the baseline project

[1] Allen Matkins/UCLA Anderson Forecast California Commercial Real Estate Survey, January 2010.

build alternatives. Similar, but slightly less positive impacts related to growth influence would be expected to result from implementation of the No Toll Variation.

*46-foot Median Variation*

The implementation of a wider median width in the Sanyo Avenue area would not be expected to impact any of the factors that might affect growth influence by the proposed project, such as travel times, travel cost, accessibility to employment, commercial activities, destinations, trip patterns, travel behavior, or the attractiveness of specific areas for development. Similar positive impacts related to growth Influence would be expected to result from implementation of the 46-foot Median Variation.

*SR-905/SR-125/SR-11 Interchange Variations and Siempre Viva Road Full Interchange Variation*

These interchange design variations could result in marginally greater accessibility and decreased travel times to the area surrounding the proposed project, which could make the area marginally more attractive for growth. This difference would not be substantial, however, for the same reasons as described for the build alternatives, and similar positive impacts related to growth influence would be expected to result from implementation of the SR-905/SR-125/SR-11 Interchange Variations and Siempre Viva Road Full Interchange Variation.

No Build Alternative

Under the No Build Alternative, all border crossing traffic in the San Diego metropolitan region would continue to be served by the San Ysidro, Otay Mesa and Tecate POEs. As described in Chapter 1.0, Proposed Project, there has been a substantial increase in trade between the U.S. and Mexico, and in the number of truck inspections that are required and the number of border crossings that occur each day. Currently, over 80 percent of merchandise crossing the U.S. - Mexico border is moved by trucks. Because of the increased crossing demand at the border, wait times for personal trips across the border have averaged 45 minutes at the Otay Mesa POE and 75 minutes at the San Ysidro POE during peak periods, while approximately 10 percent of people waited as long as one hour at the Otay Mesa POE and two hours at the San Ysidro POE. The average processing and wait time for commercial freight crossings at the existing Otay Mesa POE has been reported as typically 1.5 to 2 hours (without U.S. secondary inspection), with 10 percent of commercial crossers waiting as much as 4 hours (SANDAG/Caltrans 2006a and 2006b). As population and trade in the border region grow in the future, wait times are likely to rise, at some point surpassing the maximum time periods that many border crossers would be willing to wait. If the border continues to be a bottleneck, this could result in a curtailment of growth in the maquiladora industry near the border, and cap other types of border crossings for employment, tourism, shopping and other purposes that are vital to the economic health of the region. The result of the unmet demand for border crossings in the San Diego/Tijuana region could cause the demand to be exported to other ports and modes of transport. Indirectly, a continued bottleneck at the land border crossings for vehicles, due to the failure to implement a planned new border crossing, could result in increased demand to transport goods and services via the region's airports, ocean ports and rail terminals and lines, resulting in potential pressure to implement unplanned expansions of these facilities, with associated potential adverse impacts to environmental resources. In addition, the potential project-related economic benefits of near term and long term growth within the region would not be realized with this alternative.

### 3.3.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives**

Because no adverse impacts related to growth influence would result from implementation of the build alternatives, no avoidance, minimization, or mitigation measures would be required.

### Variations on the Build Alternatives

Because implementation of the No Toll Variation, the 46-foot Median Variation, the SR-125 Connector Variation, the SR-905/SR-125/SR-11 Interchange variations, or the Siempre Viva Road Full Interchange Variation would not result in impacts related to growth influence, no avoidance, minimization, or mitigation measures would be required.

### No Build Alternative

The No Build Alternative could have implications for growth on a regional scale, if the border continues to be a transportation bottleneck. Curtailment of growth in the maquiladora industry near the border could result, as well as stimulation of growth in other regions that provide other means to transport goods and services, such as airports, ocean ports and rail terminals and lines, with associated potential adverse impacts to environmental resources. Therefore, marginally adverse impacts related to growth influence could result from the No Build Alternative. Nevertheless, because no project action would occur, no associated avoidance, minimization, or mitigation measures would be required.

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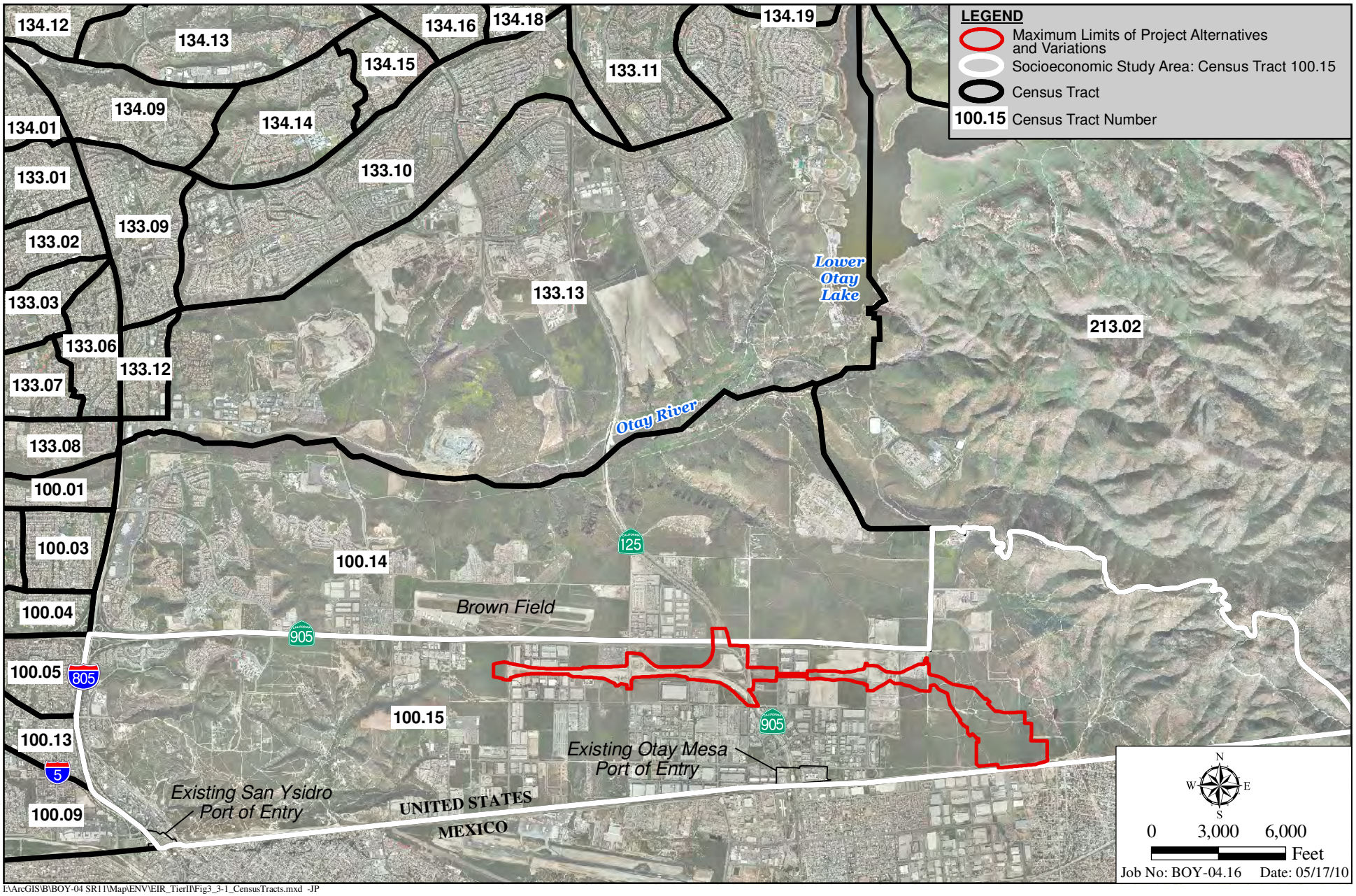


I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_3-1_CensusTracts.mxd -JP

# Socioeconomic Study Area: Census Tract 100.15

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.3-1

# 3.4 COMMUNITY CHARACTER AND COHESION

This section discusses the likely impacts of the proposed project on the character and cohesion of the local community, and is based on the project CIA (HELIX/CIC Research 2010). While the Otay Mesa East POE would serve the larger bi-national economies of the U.S. and Mexico, the community of Otay Mesa would experience the most direct and immediate effects of the proposed project. The analysis in this section focuses on the socioeconomic study area (CT 100.15; refer to Figure 3.3-1) and relies largely on demographic forecasts and other statistics prepared by SANDAG, the regional planning agency for the San Diego area.

The socioeconomic impact analysis provided in the CIA and summarized in this section is also based on a comprehensive analysis of San Diego County Assessor's database, San Diego County Assessor's maps, U.S. Census data, the EOMSP, the OMCP, and numerous other sources of published information. The project was discussed with community groups, public agency staff, and County and City community planners representing the EOMSP and OMCP area. In general, the various study area representatives agreed that the proposed public project would be a positive addition for the community and the region.

It should be noted that the project would result in no residential property acquisition, and required partial business property acquisitions would not require off-site relocations.

## 3.4.1 Regulatory Setting

NEPA (as amended), established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC 4331[b][2]). The FHWA in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

## 3.4.2 Affected Environment

This section describes social and demographic characteristics for the social and economic study area for the SR-11 and Otay Mesa East POE project (i.e., CT 100.15). The demographic data presented in this report were generally derived from the 2000 U.S Census and the American Community Survey 2008 estimates. In addition, projections for 2010 and 2030 by SANDAG, the Bureau of the Census, the U.S. Department of Labor, and the U.S. Department of Housing and Urban Development also are reported for selected characteristics (i.e., population, employment, and housing units; see Table 3.4-1).

### Community Setting

The study area used for socioeconomic analysis is defined as CT 100.15, a large statistical unit, which includes the southern portion of the EOMSP and the southeastern area of the OMCP, and covers approximately 9,900 acres (refer to Figure 3.3-1). It is located approximately 12 miles southeast of downtown San Diego and lies directly north of the Mexican border and the eastern portion of Tijuana, Baja California. CT 100.15 covers approximately 9,900 acres. Its boundaries extend from just east of I-805, north to Otay Mesa Road, east to the Otay Mountain Truck Trail ridgeline of the undeveloped San

Ysidro Mountains, and south to the border with Mexico. This census tract incorporates the existing San Ysidro and Otay Mesa POEs.

As noted in Section 3.1, *Existing and Future Land Use*, the southeastern portion of Otay Mesa is generally characterized by large-scale industrial warehouse facilities and undeveloped industrial-zoned land, with pockets of small retail development that generally serve the employees of the large industrial businesses. Based on current approved and proposed development applications (refer to Figure 3.27-2 and Table 3.1-1), the mesa is in the process of transforming to a more urbanized area, complete with large-scale industrial development, supporting commercial use, and master-planned residential developments.

Unlike much of the San Diego region, residential development in the Otay Mesa area is predominantly rural. This existing rural residential condition on Otay Mesa is in contrast with the more dense residential development west of I-805 and south of the international border. The residential portion of the OMCP Area is located approximately 1.5 miles west of the project site, and is composed of newer housing developments with associated schools, parks and neighborhood-serving commercial areas. Residential housing within the EOMSP is sparse and generally located north and northeast of the project land use study area. Three single-family residences are located on Otay Mesa Road, approximately 1,000 feet north of the proposed project. Another house is located just beyond the land use study area, approximately 2,200 feet west of the terminus of the project modifications to SR-905 at Britannia Boulevard. Several other single-family residences are located one or more miles from the proposed project in areas to the north and west (beyond the limits of the land use study area).

The sparse nature of residential development in the land use study area is such that no true residential community can be said to exist in close proximity to the project. Permanent industrial development is also limited in the immediate vicinity of the proposed project (it is only present at the western terminus of SR-11 and adjacent to the proposed modifications to SR-905), but a border-oriented, industrial business community is present nearby in the land use study area.

**Demographic Characteristics**

Table 3.4-1 presents a demographic profile of the socioeconomic study area, with data for the San Diego County region and the entire U.S. for comparative purposes.[1] The CT 100.15 demographic characteristics reveal that it differs in many respects from the greater San Diego region and the country. In general, CT 100.15 includes a relatively small population of residents. Residents of CT 100.15 are younger than residents of the County and the U.S. and they are much more likely to be Hispanic or non-White compared to countywide residents. The socioeconomic study area residents tend to be less educated, have substantially lower median household incomes, and record a high level of poverty compared to residents of the County and the U.S. overall.

[1] The logic supporting the inclusion of data for the U.S. is that prior border economic studies for the San Diego/Baja California, Mexico region have found that only about one-third of the economic impacts of the commercial border crossing activity are experienced in San Diego County, while about half of the total economic impact of this activity is experienced nationwide.

**Table 3.4-1**
**SOCIOECONOMIC STUDY AREA, COUNTY, AND U.S. POPULATION AND HOUSING CHARACTERISTICS**

| Characteristic | CT 100.15 | San Diego Region | United States |
|---|---|---|---|
| | | | |
| **2000 Population (U.S. Census)** | 1,062 | 2,813,833 | 281,421,906 |
| | | | |
| **2008 Population (SANDAG)** | 2,499 | 3,146,274 | 304,059,724 |
| | | | |
| **Gender (2000 Census)** | | | |
| Male | 50.3% | 50.3% | 49.1% |
| Female | 49.7% | 49.7% | 50.9% |
| | | | |
| **Age Distribution (2000 Census)** | | | |
| Under 5 years | 8.6% | 7.1% | 6.8% |
| 5 to 19 | 32.5% | 21.8% | 21.8% |
| 20 to 34 | 20.1% | 24.0% | 20.9% |
| 35 to 54 | 23.4% | 28.8% | 29.4% |
| 55 to 64 | 7.1% | 7.3% | 8.6% |
| 65+ | 8.4% | 11.2% | 12.5% |
| | | | |
| **Median Age (2000 Census)** | 26.5 | 33.2 | 35.3 |
| | | | |
| **Median Household Income (2000 Census)** | $29,723 | $47,067 | $41,994 |
| **Median Household Income (2008 SANDAG)** | $39,745 | $68,470 | $50,303 |
| **Families Below Poverty Level (2000 Census)** | 29.0% | 8.4% | 9.2% |
| | | | |
| **Population 25+ yrs. College Graduates (2000 Census)** | 9.0% | 29.6% | 24.4% |
| | | | |
| **Population by Race & Ethnicity (2000 Census)** | **100.0%** | **100.0%** | **100.0%** |
| Non-Hispanic | 5.8% | 73.3% | 87.5% |
| American Indian and Alaska Native | 0.6% | 0.5% | 0.7% |
| Asian & Pacific Islander | 0.8% | 9.1% | 3.7% |
| Black or African American | 0.5% | 5.5% | 12.1% |
| White | 4.0% | 55.0% | 69.1% |
| Other or Multiple Race | 0.1% | 3.1% | 1.8% |
| Hispanic | 94.2% | 26.7% | 12.5% |
| | | | |
| **Language Spoken at Home (2000 Census)** | | | |
| English only | 9.0% | 67.0% | 82.1% |
| Spanish | 91.0% | 21.9% | 10.7% |
| Asian Pacific Language | 0.0% | 7.1% | 2.7% |
| Other Languages | 0.0% | 4.0% | 4.5% |

**Table 3.4-1 (cont.)**
**SOCIOECONOMIC STUDY AREA, COUNTY, AND U.S. POPULATION AND HOUSING CHARACTERISTICS**

| Characteristic | CT 100.15 | San Diego Region | United States |
|---|---|---|---|
| **2000 Total Housing Units (2000 Census)** | 248 | 1,040,149 | 115,904,641 |
| **Total Occupied Units** | 235 | 994,677 | 105,480,101 |
| Owner-Occupied Housing | 36.0% | 55.4% | 66.2% |
| Renter-Occupied | 64.0% | 44.6% | 33.8% |
| | | | |
| **Housing Unit Type (2000 Census)** | **100.0%** | **100.0%** | **100.0%** |
| Single Family Residence (detached) | 54.4% | 51.0% | 60.3% |
| Attached Units | 38.7% | 44.5% | 31.9% |
| Mobile Homes and Other | 6.9% | 4.5% | 7.8% |
| | | | |
| **Persons per Dwelling Unit (2000 Census)** | 4.5 | 2.7 | 2.4 |
| | | | |
| **Average Rent (2000 Census)** | $620 | $711 | $602 |
| | | | |
| **Median Housing Value (2000 Census)** | $182,871 | $223,363 | $119,600 |
| **Housing Vacancy Rate** | 5.2% | 4.4% | 9.0% |
| | | | |
| **Year Built** | | | |
| 1990 to 2000 | 2.0% | 13.9% | 17.0% |
| 1980 to 1989 | 37.0% | 21.9% | 15.8% |
| 1960 to 1979 | 37.0% | 41.3% | 32.2% |
| 1940 to 1959 | 20.0% | 17.8% | 20.0% |
| 1939 or earlier | 4.0% | 5.1% | 15.0% |
| | | | |
| **Total Employment** | **100.0%** | **100.0%** | **100.0%** |
| **2000 Census (resident employment)** | 341 | 1,232,739 | 129,721,512 |
| **2010 Employment Forecast (SANDAG)** | 13,686 | 1,573,742 | 143,002,000 |
| Employment Percent Change (2000-2010) | N/A | 27.7% | 10.2% |
| **2030 Employment Forecast (SANDAG)** | 28,109 | 1,913,682 | 172,167,000 |
| Employment Percent Change (2000-2030) | N/A | 55.2% | 32.7% |
| Employment Percent Change (2010-2030) | 105.4% | 21.6% | 20.4% |
| | | | |
| **Unemployment Rate (16 years or older; 2000 Census)** | 3.9% | 5.8% | 3.7% |
| | | | |
| **Occupation (2000 Census)** | 100.0% | 100.0% | 100.0% |
| **Management, professional, and related occupations** | 12.0% | 37.5% | 33.6% |
| **Service occupations** | 20.0% | 16.0% | 14.9% |
| **Sales and office occupations** | 28.0% | 27.3% | 26.7% |
| **Farming, forestry, and fishing** | 0.0% | 0.5% | 0.7% |
| **Construction, extraction, and maintenance** | 5.0% | 8.7% | 9.4% |
| **Production, transportation, and material** | 35.0% | 9.9% | 14.6% |

Sources: CIC Research (2009) and 2000 U.S. Census, unless otherwise designated.

Population

Based on the 2008 population estimates from SANDAG, there were 2,499 residents in CT 100.15. This area represents less than 0.1 percent of the countywide population of 3,146,274, while the San Diego region represents about one percent of the total U.S. population of 304 million.

Race and Ethnicity

A minority population dominates the socioeconomic study area. Based on the 2000 Census, most of the residents (94.2 percent) in CT 100.15 were Hispanic, while less than 3 out of 10 residents (26.7 percent) countywide were Hispanic. Compared to the County overall, the socioeconomic study area also reported a low proportion of White Non-Hispanic residents (4.0 percent versus 55.0 percent). There were very low proportions (less than 1.0 percent each) of Asians, Pacific Islanders, Blacks/African-American or American Indian/Alaskan Native residents in the census district. In contrast, the County reported a larger proportion of Asian (9.1 percent) and Black or African-American residents (5.5 percent), but a similarly small number of American Indian/Alaskan Natives (0.5 percent).

Median Age

The median age for socioeconomic study area residents was 26.5 years compared to 33.2 years for the County and 35.3 years nationwide. The percentage of youths under age 20 in the socioeconomic study area (41.1 percent) is higher than the County (28.9 percent) and the U.S. (28.6 percent) reflecting a greater presence of large families in the local area community.

Education

The 2000 Census indicated that a lower percentage of the population over 25 years of age in the socioeconomic study area had completed a college degree (9.0 percent), compared to almost 30 percent of the countywide population and about 24 percent of the U.S. population.

Employment

At the time of the 2000 Census, the percentage of unemployed residents (over age 16) in the socioeconomic study area (3.9 percent) was lower than the County average (5.8 percent) and similar to the nationwide average (3.7 percent). Overall, the data indicated that over one third of the residents in CT 100.15 are employed in production, transportation and material occupations (35.0 percent), and more than one-quarter are employed in the sales and office occupations (28.0 percent). The County reported more employees in management or professional occupations (37.5 percent) and less in production, transportation or materials occupations (9.9 percent).

Household Income and Poverty

The 2008 estimated median household income for the socioeconomic study area residents was $39,745, which was substantially lower than the countywide median income of $68,470 and the nationwide median income of $50,303. The lower median income for residents in CT 100.15 was consistent with the lower education level reported for area residents and the high proportion of renters (64 percent). The 2000 U.S. Census recorded a median housing value for the socioeconomic study area of $183,000, which was lower than the County's median ($223,000), but higher than the national housing median value of $120,000.

In the 2000 Census, more than one quarter of the families in the socioeconomic study area were reported as having incomes below the poverty level (29.0 percent). This was about three times the countywide proportion (8.4 percent) and the nationwide proportion (9.2 percent).

In 2008, 27 percent of families in the socioeconomic study area had incomes below the poverty guideline levels set by the U.S. Department of Health and Human Services (HHS). The HHS poverty guideline for 2009 was $22,050 for a family of four and in 2000 was $17,050 for a family of four. In contrast, for 2008 about 11 percent of families in San Diego County had an estimated income that was below the poverty guidelines set by the HHS.

Household Size

The number of people per dwelling unit was 4.5 in the socioeconomic study area. This was higher than the number of people per dwelling unit in the County (2.7 people) and the U.S. (2.4 people). The housing vacancy rate was 5.2 percent for CT 100.15, 4.4 percent in the County and 9.0 percent in the U.S.

**Community Facilities**

As discussed in the project CIA (HELIX/CIC Research 2010), and the introduction to Chapter 3.0, all parks and recreational facilities are located at a distance of at least three miles from the proposed project.

Schools

Public schools in the vicinity are within the San Ysidro Elementary School District and the Sweetwater Union High School District. All public schools are located at least two miles west and northwest from the project site. A satellite campus of Southwestern College is located immediately south of the proposed modifications to SR-905, east of Britannia Boulevard. Currently, no additional schools are planned in or near the land use study area, although some scenarios being studied for the OMCP update would include an additional Sweetwater Union High School District high school at Airway Road and Britannia Boulevard, approximately 900 feet from the westernmost point of the proposed modifications to SR-905.

Transit Service

*Public Bus Service*

The Otay Mesa community is served by MTS. Fixed-route public bus service currently extends only to the western edge of the project site. Transit service consists of Routes 905 and 905A (see Figure 3.4-1, *Transit Service*; MTS 2009).

Route 905 provides service between the Iris Avenue trolley station in Nestor, along SR-905 and south to the Otay Mesa POE. Within Otay Mesa, Route 905 extends along SR-905/Otay Mesa Road, Paseo de las Americas, Via de la Amistad and Roll Drive. Route 905A serves a similar area, but diverges east of Britannia Boulevard during peak hours to serve an area to the south. Within Otay Mesa, Route 905A extends along the roads also included in Route 905, as well as Britannia Boulevard, Airway Road, Avenida Costa Azul, Costa Norte, Costa Este, Costa Sur, and Avenida Costa Brava.

At the western terminus of bus routes 905 and 905A, the Iris Avenue trolley station along the MTS Blue Line trolley provides connections to bus routes serving the San Diego communities of Nestor and San Ysidro, as well as the adjacent cities of Imperial Beach and Chula Vista.

Currently, no BRT service exists in the San Diego region. The South Bay BRT is being developed to provide high-speed transit connections between downtown San Diego and the Otay Mesa POE along the future I-805 Managed Lanes and a dedicated transit way through eastern Chula Vista. At full buildout, the South Bay BRT project will be 21 miles long and will include 15 stations with upgraded passenger shelters, technological enhancements, and premium coach buses. Various options are being explored to connect the proposed Otay Mesa East POE to the BRT system. Preliminary engineering, environmental work and final design are in process; Phase One is planned to be in operation by late 2012.

*Light Rail Transit*

Light rail service to the southern San Diego region is provided by the MTS Blue Line trolley. The Blue Line reaches its southernmost point at the international border in San Ysidro. Bus routes 905 and 905A, discussed above, provide transit connections between the trolley and Otay Mesa.

*Private Transit*

In addition to public transit, private transit operators, including taxis, vans and shuttle buses, operate in the area of the Otay Mesa and San Ysidro POEs. Van and shuttle bus services are frequently used by patrons of Tijuana International Airport to access the airport or return to the U.S. via the existing POEs.

*Pedestrians and Bicycle Routes*

Pedestrians are common in nearby San Ysidro, especially near the San Ysidro POE, but Otay Mesa overall has relatively little pedestrian activity. Traffic in the area is generally associated with industrial activities, including large trucks hauling cargo across the border and parking on large lots. Several factors encourage pedestrian activity near the existing Otay Mesa POE, including commercial establishments, bus routes, and passenger-vehicle parking lots in the area north of the POE between Paseo de las Americas and Roll Drive. A bicycle route along SR-905/Otay Mesa Road as well as bike lanes along the north/south portion of SR-905 and along Siempre Viva Road between La Media Road and Enrico Fermi Drive offer a further alternative to driving.

### 3.4.3 Environmental Consequences

**Community Cohesion**

Impacts to community cohesion, under federal guidelines, are expected to occur when any of the following result:

- A disruption or division of the physical arrangement of an established community
- A conflict with established recreational, educational, religious, or scientific uses of the area

Impacts are based on the project's effect on local residents' sense of belonging in relation to their neighborhood or the community at large, as well as anticipated changes in the physical character of the community. The project would represent impacts to a community if it were to present either a physical or psychological barrier to activity or recreational areas of the community (Caltrans 1997).

Methods for identifying and measuring the cohesiveness of a community may include looking at the location of major activity centers used by residents (e.g., if they are clustered nearby or located out of the area), length of home ownership, percentage of residents who are elderly, and percentage of single-family ownership. A large elderly population, a high percentage of single-family ownership, long residential

tenure, and the availability and centrality of nearby activity centers are all generally indicative of a high degree of community cohesion.

Build Alternatives

Implementation of the build alternatives would take place in a partially undeveloped industrial area that is not close to an existing residential community, or any recreational, educational, religious or scientific uses. The project would be consistent with surrounding commercial and industrial land uses, so its introduction into the business community would not disrupt the established community or conflict with existing community-serving uses, including parks, recreational facilities, schools or transit facilities. Access to operations of the Southwestern College satellite campus adjacent to the proposed SR-905 modifications would not be disrupted. The project would not divide any existing business complexes or disrupt existing pedestrian or vehicle circulation patterns in the land use study area. Vehicle and pedestrian access between the north and south of SR-11, and the portions of SR-905 that are affected by the project would be available at Britannia Boulevard, La Media Road, Sanyo Avenue, Enrico Fermi Drive, Alta Road and Siempre Viva Road. The business community and the general public would benefit from the reduced border wait times at existing POEs and the related regional transportation efficiencies associated with the proposed project. During construction, access to the adjacent businesses would continue to be available via the existing roadways that currently access these businesses, although occasional detours and interruption of through access at cross-streets may occur. The build alternatives would have no permanent or temporary adverse impacts to community cohesion.

Variations on the Build Alternatives

*No Toll Variation, 46-foot Median Variation, SR-905/SR-125/SR-11 Interchange Variations*

Implementation of the No Toll Variation, the 46-foot Median Variation, or the SR-905/SR-125/SR-11 Interchange Variations would not alter the conclusions assessed for the project build alternatives with regard to community cohesion.

*Siempre Viva Road Full Interchange Variation*

While any of the build alternatives would increase accessibility to East Otay Mesa and to Mexico, the Two Interchange Alternative with the Siempre Viva Road Full Interchange Variation would provide the greatest accessibility between SR-11 and local businesses in the East Otay Mesa area. This additional access would represent a community access benefit through enhanced connectivity between the POE and local East Otay Mesa businesses. The traffic queuing analysis performed as part of the project traffic study (2010) indicates, however, that the Siempre Viva Road Full Interchange Variation would have the potential for queue storage and weaving problems in several parts of the interchange.

No Build Alternative

The No Build Alternative would have no permanent or temporary impacts to community cohesion. The business community and the general public would not benefit from the proposed project, the reduced border wait times at existing POEs and the associated regional transportation efficiencies. The resulting inefficiencies in cross-border travel would have a cumulative negative social and economic effect that could adversely affect the socioeconomic health and cohesion of the East Otay Mesa business community. No adverse effect to existing residential community cohesion or social serving uses would occur due to the absence of such uses in the land use study area.

## Community Character

Build Alternatives

As previously noted, no residential community exists in the land use study area; with the exception of the Southwestern College site, it is industrial/commercial in character, or undeveloped but designated for future industrial development. A highway and POE/CVEF would be generally compatible with this community character, although the potential exists for incompatibilities with respect to noise levels, operational issues, and visual character/quality. For the reasons listed below, the use of the required land for SR-11, its connectors to SR-905, associated SR-905 modifications, and border crossing facilities under the build alternatives would be compatible with the existing character of the area, in terms of localized noise and operational issues:

Noise

- Project-generated operational noise in the undeveloped areas of the project site would not result in adverse impacts because no affected noise receptors are located in this area. In addition, project-generated noise is consistent with the future industrial character of the community at build-out, as designated in the EOMSP.

- Project-generated operational noise at adjacent industrial uses in the Sanyo Avenue area and adjacent to the proposed SR-905 modifications would not exceed 72 dBA, which is the noise abatement criterion (NAC) for industrial uses of this type (Activity Category C), according to federal noise regulations under 23 CFR 772 (HELIX 2010b).

- Improvements along SR-905 between SR-125 and Britannia Boulevard to accommodate SR-11 would be entirely within existing R/W for the SR-905 project that is approved and under construction. Project-generated operational noise at many of the receiver locations adjacent to SR-905 would exceed the applicable activity category NAC, but would not register a substantial increase over noise levels once SR-905 is operational. Only at the Southwestern College campus are there outdoor areas of frequent human use that would benefit from a reduced noise level. The Noise Abatement Decision Report (NADR) prepared for the project indicates that construction of an effective noise attenuation barrier at this location would be feasible from a technical standpoint, but not economically reasonable. Although an unmitigable noise impact would occur at the college, it would not constitute a community character impact, because the community in this area already includes SR-905 and its associated noise. The addition of the proposed auxiliary and travel lanes to SR-905 would not substantially increase noise levels at this location above levels anticipated under the approved SR-905 design, and would not substantially alter the character of the approved six-lane facility. Additional noise attributable to the SR-11 project would be minimal, and would be compatible with the character of the community adjacent to SR-905.

- Project-generated construction noise would be temporary, and therefore would not result in a community character compatibility impact.

Operational

- Approximately one acre of the partial acquisition area proposed on the PG Films property and a similar one-acre area on the LB Realty property currently comprise a City drainage easement (including steep slopes). The remaining areas of parcel acquisition in this area are currently used

for landscaping (in the case of PG Films) and parking (in the case of LB Realty). On the Sanyo E&E property, the proposed acquisition area consists mainly of landscaping, although a small area (0.10 acre under the Two Interchange Alternative and 0.05 acre under the One and No Interchange Alternatives) is used as a driveway. Thus, where partial acquisitions would occur, businesses adjacent to the proposed project would likely require some changes in operations, including relocation of parking. Nevertheless, it is expected that all nearby existing businesses would be able to continue to operate, including those with partial acquisitions by the project.

One community character compatibility issue related to visual impacts has been identified, however, as follows:

- In the area immediately east of Sanyo Avenue, vertical retaining walls as high as approximately 26 feet would be placed at the edge of the R/W as close as approximately 38 feet from existing industrial buildings under the Two Interchange Alternative. Under the One and No Interchange Alternatives, these retaining walls would be as close as an estimated 50 feet from the existing industrial buildings. At one parcel, the wall would be directly across from the building entrance. Although few viewers would be present, this moderately high level of change to the visual environment, caused by the encroachment of the new, large-scale, visually dominant walls into the area, would result in a community character compatibility impact. Mitigation/minimization measures described in the project VIA (HELIX 2010a) would be implemented to minimize this visual/ community character compatibility impact.

Based on the preceding analysis, one community character compatibility impact would occur under all of the build alternatives. This impact would be slightly less under the One and No Interchange alternatives, because the walls would be located farther from the existing industrial buildings. This community character compatibility impact would be mitigable through measures identified in Section 3.9 of this EIR/EIS, based on the VIA (HELIX 2010a) for the project.

Variations on the Build Alternatives

*No Toll Variation*

Under this variation, the proposed facilities would be expected to accommodate a higher volume of traffic/border crossers, as detailed in the Traffic Technical Report (VRPA 2009). In spite of the greater volumes of traffic and border crossers, this variation would not be expected to result in community character compatibility impacts for the same reasons as discussed for the tolled alternatives above.

*46-foot Median Variation*

For all of the build alternatives, partial acquisitions of the properties owned by PG Films and LBA Realty would encompass approximately four percent more land area under the 46-foot Median Variation than under the baseline build alternatives that would include a 22-foot median for SR-11 in the Sanyo Avenue area. The partial acquisition of the Sanyo Avenue property would be approximately two percent greater under the 46-foot Median Variation. This would mean that more of these businesses' facilities would need to be removed or relocated (including specialized storage facilities on the PG Films properties), with consequent required operational changes. Interviews with the property owners involved have indicated that these businesses would still be able to operate, but they would be more severely affected under the 46-foot Median Variation. No community character compatibility impact would occur with respect to operational issues.

The retaining walls on each side of proposed SR-11 in the area immediately east of Sanyo Avenue, as described above, would be as close as approximately 26 feet from existing industrial buildings under the Two Interchange Alternative with the 46-foot median, and approximately 38 feet from these buildings under the One or No Interchange alternatives. This impact would be greater than under the baseline build alternatives with the 22-foot median east of Sanyo Avenue. The mitigation/minimization measures identified in Section 3.9 of this EIR/EIS, based on the project VIA (HELIX 2010a) would also apply to this variation.

The project Noise Study Report (HELIX 2010b) indicates that project-generated noise would not exceed the 72 dBA NAC in the Sanyo Avenue area under the 46-foot Median Variation, so no community character compatibility impact would occur with respect to noise. The project VIA (HELIX 2010a), however, does indicate a high (with the Two Interchange Alternative) to moderately high (with the One or No Interchange alternatives) visual impact under this variation. The VIA notes that a "moderately high" visual impact may require extraordinary mitigation practices, and landscape treatment required would generally take longer than five years to mitigate. The VIA also notes that in the case of a "high" visual impact, architectural design and landscape treatment may not mitigate the impacts, and an alternative project design may be required to avoid highly adverse impacts. This would indicate that the 46-foot Median Variation would result in a community character incompatibility impact due to issues of visual character and quality.

*Siempre Viva Road Full Interchange Variation*

As previously noted, the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative would result in an additional 20.2 acres of partial parcel acquisition in the vicinity of the proposed interchange at Siempre Viva Road. While the dedication of industrially-designated land for transportation uses would constitute a land use impact, it would be compatible with the existing character of the area for the same reasons as discussed for the Two Interchange Alternative without this variation. No community character compatibility impact would occur with respect to operational issues. Although this interchange would take up a larger land area and would appear larger than the half interchange under the baseline Two Interchange Alternative, this difference would not be expected to result in a community character impact based on the lack of existing development in this area and the planned industrial use of the area, as well as the proximity of the proposed POE to this interchange.

No Build Alternative

As previously noted, it is possible that the No Build Alternative would only delay implementation of the project, allowing development in the area to proceed, and eventually requiring the acquisition of developed or environmentally constrained land to implement SR-11 and the Otay Mesa East POE in the future. This could result in greater noise-, operational- and visual-related compatibility impacts to community character than would occur under the currently proposed project build alternatives.

### 3.4.4 Avoidance, Minimization, and/or Mitigation Measures

**Build Alternatives**

The following avoidance, minimization and mitigation measures would reduce community character compatibility impacts associated with the visual prominence of high retaining walls in the vicinity of Sanyo Avenue. Further explanation of these measures is contained in Section 3.9, *Visual/Aesthetics*, of this EIR/EIS and in the project VIA (HELIX 2010a).

- Architectural features, textures and colors should be used to mitigate the appearance of retaining wall surfaces and deter graffiti. Walls should incorporate architectural features such as pilasters

and caps to provide shadow lines, provide relief from monolithic appearance, and reduce their apparent scale. The architectural surface treatment should follow a highway-wide theme as identified in the SR-11 Landscape Concept Plan and utilize/adapt architectural features of the adjacent SR-905 project for continuity

- In areas where retaining walls must be placed in close proximity to and above the traveled way, space should be reserved, between the wall and the safety barrier to include a six-foot wide planting pocket

- Where site conditions permit, retaining walls over 15 feet in height should be divided into two separate structures sufficiently offset from one another to create a flat landscape planting area between the two

- Retaining walls should be located at mid slope wherever possible to provide adequate area for landscape screening between the wall and the highway

- Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall should be used where appropriate. This type of wall should be visually compatible with surrounding terrain and provide room at the base for a landscape screening buffer

- Mechanically Stabilized Earth (MSE) walls that utilize a stacking tray design such as Evergreen walls should be used in place of Caltrans standard design crib walls wherever possible to provide a landscaped surface that will blend in with the surrounding landscape

- Any solid, screening fences used on structures should be carefully coordinated with bridge aesthetics and architectural elements

- Lighting and mileage/directional signs should be designed and coordinated comprehensively and as a complete package, either as free-standing elements or in conjunction with over/undercrossing structures and architectural features to create a unified design theme and clear driver information

Because implementation of the build alternatives would not impact community cohesion, would not result in residential or business relocation, would not have a substantial impact on public access to educational or religious institutions or recreation, and would not impact the parking supply in the land use study area, no additional avoidance, minimization, and/or mitigation measures would be required.

A TMP (AECOM/Caltrans 2009a) has been developed to implement best management practices during project construction to minimize interruptions to traffic patterns, and to promote safety and security. The businesses of the local community could experience some temporary noise and accessibility restrictions during construction, but the proposed project would not adversely impact community cohesion or character in this regard. No avoidance, minimization, and/or mitigation measures would be required.

**Variations on the Build Alternatives**

The above-listed avoidance, minimization, or mitigation measures would still apply if any of the variations of the build alternatives are implemented, and no additional measures would be required. This conclusion would apply to the No Toll Variation, the 46-Foot Median Variation, the SR-905/SR-125/ SR-11 Interchange Variations, or the Siempre Viva Road Full Interchange Variation.

### No Build Alternative

Adverse community character or cohesion impacts would occur under the No Build Alternative, because cross border traffic would not be diverted from the existing congested POEs. However, because no action would occur, no avoidance, minimization, or mitigation measures would be required. No parking impacts, interrupted access to educational or religious institutions, or impacts due to residential or business relocations would occur, so no avoidance, minimization, and/or mitigation measures would be required.

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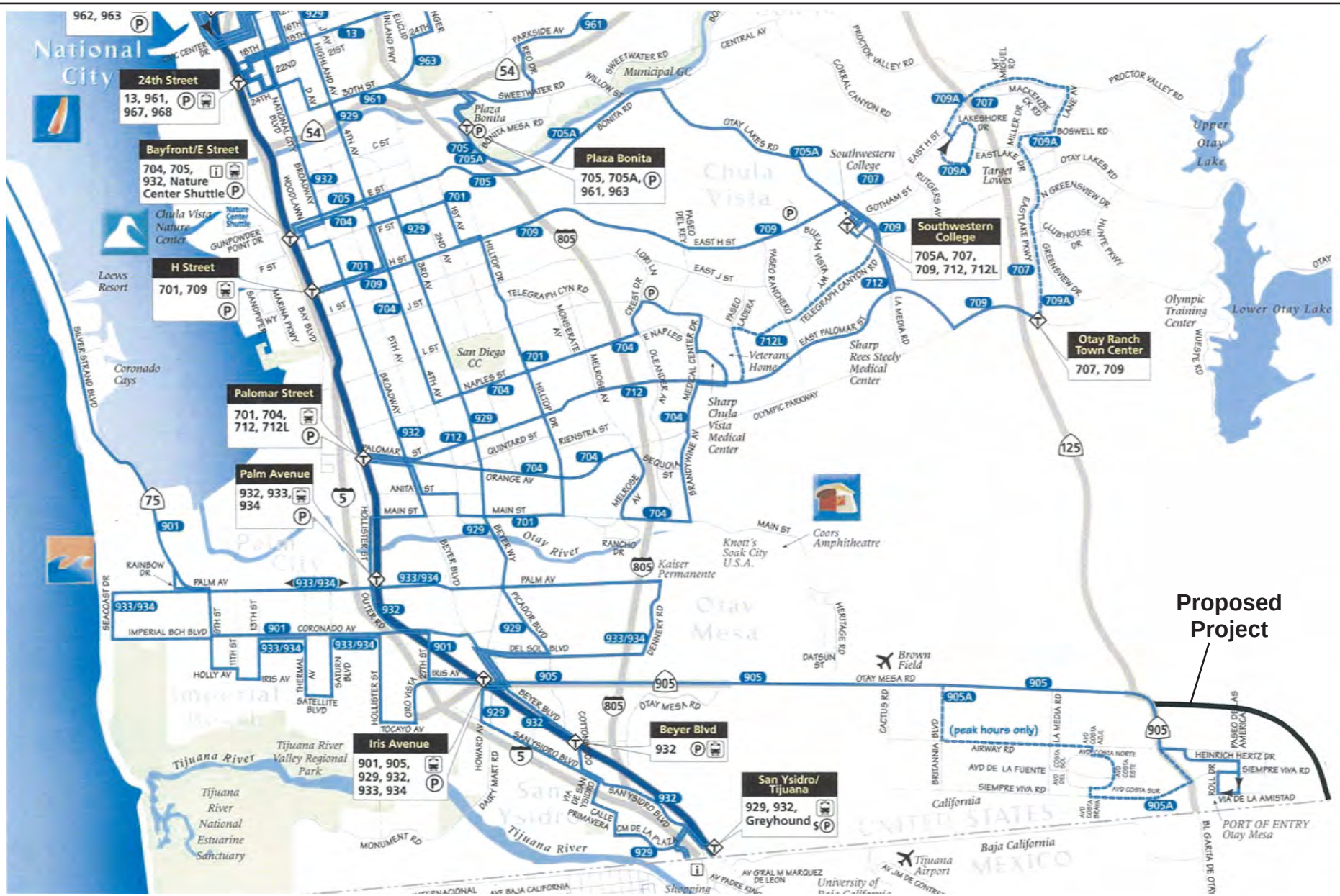


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# Transit Service

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.4-1

# 3.5 RELOCATIONS AND REAL PROPERTY ACQUISITION

As noted in Section 3.1, *Existing and Future Land Use*, and the project CIA (HELIX/CIC Research 2010), field investigations of the land use study area were conducted on June 5, August 25 and September 25, 2009, as well as January 12, 2010. County Assessor's data were combined with the field reviews to identify the individual properties within the project area of disturbance. Each parcel was identified by assessor's parcel number (APN), site address (whenever available), the property owner, parcel size, land use, tax rate area, annual property tax, and census tract. These data are analyzed here to assess likely project impacts related to relocations and real property acquisition. Economic data in this section are derived from the economic analysis presented in the project CIA (HELIX/CIC Research 2010). It should be noted that the project would result in no residential property acquisition, and required partial business property acquisitions would not require off-site relocations.

## 3.5.1 Regulatory Setting

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24. The purpose of RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix F for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.). Please see Appendix G for a copy of the Caltrans Title VI Policy Statement.

All property acquisition and compensation activities required for project implementation are also implemented in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (as amended) and Title 49 CFR Part 24.

## 3.5.2 Affected Environment

As described in Section 3.1, *Existing and Future Land Use*, the land use study area currently is largely undeveloped, and designated for industrial and technology business uses (with the exception of small areas for commercial and rural residential use).

As discussed in Section 3.1, *Existing and Future Land Use*, land uses surrounding the proposed project are dominated by undeveloped land and industrial uses, along with several vehicle storage lots and the existing CVEF (refer to Figure 3.1-1). To date, existing and proposed development in the land use study area consists of industrial and transborder support uses, many of which were established with the expectation that facilities provided by the proposed project would be developed. These land uses are discussed in more detail in Section 3.1, *Existing and Future Land Use*, while the character of the surrounding community is discussed in Section 3.4, *Community Character and Cohesion*.

## 3.5.3 Environmental Consequences

### Relocations

Build Alternatives

All parcel acquisitions required for implementation of the build alternatives would be partial acquisitions of industrial property east of Sanyo Avenue, and would not involve acquisition of structures. As

discussed below under *Property Acquisitions*, acquisitions would require operational adjustments by the businesses involved, but they would still be able to operate. While parcel occupants may be eligible for reimbursement under the RAP for the action of moving personal property that is within the proposed SR-11 R/W to other portions of the affected parcels, no full residential or business relocations would be required as a result of any of the three build alternatives. The impact to personal property would be slightly greater for the Two Interchange Alternative than for the One or No Interchange alternative.

Variations on the Build Alternatives

Implementation of the No Toll Variation, the SR-125 Connector Variation, the SR-905/SR-125/SR-11 Full Interchange Variation or the Siempre Viva Road Full Interchange Variation would not alter the conclusions reached for the project build alternatives. The 46-foot Median Variation would result in a greater impact to personal property within the adjacent industrial developments east of Sanyo Avenue, that would be eligible for reimbursement under the RAP for the action of moving personal property within the proposed SR-11 R/W to other portions of the affected parcels. This increased impact would not require any full residential or business relocations under any of the build alternatives. As with the baseline build alternatives, the Two Interchange Alternative with the 46-foot Median Variation would impact a greater area of personal property east of Sanyo Avenue than either the One or No Interchange alternative with this variation.

No Build Alternative

No impacts to business property or residential or business relocations would occur as a result of the No Build Alternative.

**Property Acquisitions**

A total of 19 parcels encompassing approximately 836 acres, as listed on the San Diego County Assessor's database, would be affected by the R/W acquisition requirements of the build alternatives (refer to Figures 2-9a through 2-9d, 2-11a through 2-11b, and 2-12a through 2-12d). The affected parcels include 18 privately owned parcels, which consist of 4 industrial lots with improved buildings, 2 vacant industrial parcels with temporary vehicle and storage uses, 11 vacant industrial parcels and 1 vacant parcel designated for industrial and rural residential development.[1] The OWD owns the one public parcel (APN 648-070-18; refer to Figure 2-9c).

Table 3.5-1 presents the proposed partial acquisitions of parcels under the three baseline build alternatives. All property acquisitions would be undertaken in a manner consistent with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 CFR, Part 24, to ensure fair, consistent and equitable treatment in the process of property acquisition.

[1] Note that proposed SR-11 and the POE and CVEF sites would not traverse the portion of this parcel that is designated for residential use; such uses would be located over 1,000 feet from this area.

**Table 3.5-1**
**PARTIAL PARCEL ACQUISITIONS FOR THE BUILD ALTERNATIVES**

| Parcel Owner | Developed? | Parcel Number | Parcel Size (acres) | Two Interchange Alternative (22-foot Median; half interchange at Siempre Viva Road) | | One Interchange Alternative (22-foot Median; half interchange at Siempre Viva Road) | | No Interchange Alternative (22-foot Median; half interchange at Siempre Viva Road) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Parcel Acquisition (acres) | Percent of Total Parcel | Parcel Acquisition (acres) | Percent of Total Parcel | Parcel Acquisition (acres) | Percent of Total Parcel |
| **Acquisition of Privately Owned Land** | | | | | | | | | |
| Scannell Properties #102 LLC | No | 646-130-61 | 4.71 | 1.21 | 25.7% | 0.65 | 13.8 | 0.68 | 14.4 |
| Airway Diego, LLC | Yes | 646-130-60 | 17.91 | 0.87 | 4.9% | 1.06 | 5.9% | 1.06 | 5.9% |
| Makram A. & Maureen T. Hanna | No | 646-130-27 | 34.39 | 3.45 | 10.0% | 1.24 | 3.6% | 1.24 | 3.6% |
| South County Commerce Center LLC | Graded | 646-130-39 | 19.78 | 3.47 | 17.5% | 3.43 | 17.3% | 3.30 | 16.7% |
| | | 646-130-40 | 19.82 | 3.79 | 19.1% | 3.57 | 18.0% | 3.64 | 18.4% |
| | | 646-130-41 | 19.85 | 3.26 | 16.4% | 2.83 | 14.3% | 2.82 | 14.2% |
| | | 646-130-42 | 19.87 | 5.62 | 28.3% | 3.63 | 18.3% | 3.52 | 17.7% |
| **Subtotal: South County Commerce Center LLC** | | | 79.32 | 16.14 | 20.3% | 13.46 | 17.0% | 13.28 | 16.7% |
| PG Films, LLC | Yes | 646-131-03 | 2.13 | 0 | 0% | 0 | 0% | 0 | 0% |
| | | 646-131-04 | 2.15 | 0.65 | 30.2% | 0.57 | 26.5% | 0.57 | 26.5% |
| | | 646-131-05 | 2.19 | 0.72 | 32.9% | 0.63 | 28.8% | 0.63 | 28.8% |
| | | 646-131-06 | 2.06 | 0 | 0% | 0 | 0% | 0 | 0% |
| **Subtotal: PG Films, LLC** | | | 8.53 | 1.37 | 16.1% | 1.2 | 14.1% | 1.2 | 14.1% |
| LBA Realty Fund III | Yes | 646-131-09 | 4.27 | 1.36 | 31.9% | 1.19 | 27.9% | 1.19 | 27.9% |
| | | 646-131-10 | 4.14 | 0 | 0% | 0 | 0% | 0 | 0% |
| | | 646-131-11 | 3.53 | 0 | 0% | 0 | 0% | 0 | 0% |
| | | 646-131-12 | 6.14 | 0 | 0% | 0 | 0% | 0 | 0% |
| **Subtotal: LBA Realty Fund III** | | | 18.08 | 1.36 | 7.5% | 1.19 | 6.6% | 1.19 | 6.6% |
| Sanyo E & E Corp. | Yes | 646-131-14 | 18.87 | 0.81 | 4.3% | 0.47 | 2.5% | 0.47 | 2.5% |
| | | 646-131-17 | 18.86 | 0 | 0% | 0 | 0% | 0 | 0% |
| **Subtotal: Sanyo E & E Corp.** | | | 37.73 | 0.81 | 2.1% | 0.47 | 1.2% | 0.47 | 1.2% |
| Kearny PCCP Otay 311 LLC | No | 648-070-03 | 158.79 | 27.76 | 17.5% | 27.77 | 17.5% | 24.27 | 15.3% |
| | | 648-080-27 | 151.63 | 103.03 | 68.1% | 103.02 | 67.9% | 103.02 | 67.9% |
| **Subtotal: Kearny PCCP Otay 311 LLC** | | | 310.42 | 130.79 | 42.1% | 130.79 | 42.1% | 127.29 | 41.0% |
| TPO LLC | Temporary use | 648-070-09 | 81.30 | 21.97 | 27.0% | 10.52 | 12.9% | 10.70 | 13.2% |
| Kouladjian Family Revocable Trust | Temporary use | 648-070-13 | 38.19 | 5.61 | 14.7% | 13.62 | 35.7% | 4.81 | 10.4% |
| Michael J. McKany | No | 648-070-14 | 39.09 | 5.16 | 13.2% | 12.17 | 31.1% | 3.99 | 10.2% |
| Otay Business Park LLC | No | 648-070-21 | 159.36 | 42.22 | 26.5% | 40.48 | 25.4% | 40.43 | 25.4% |
| Rancho Vista Del Mar | No | 648-080-18 | 40.00 | 13.89 | 34.7% | 13.89 | 34.7% | 13.89 | 34.7% |
| **Subtotal: All Private Land** | | | **869.03** | **244.84** | **28.2%** | **240.75** | **27.7%** | **220.23** | **25.3%** |
| **Land Acquisition From Public Agencies** | | | | | | | | | |
| Otay Water District | No | 648-070-18 | 3.64 | 0.31 | 8.5% | 0.96 | 26.4% | 0.26 | 7.1% |
| **Total: All Private and Public Land** | | | **872.67** | **245.15** | **28.1%** | **241.71** | **27.7%** | **220.49** | **25.3%** |

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Two Interchange Alternative

As shown in Table 3.5-1, under the Two Interchange Alternative, the partial acquisition area for the 18 private parcels would be 244.8 acres plus 0.3 acre of the one public agency parcel. The combined total acquisition area would be 245.2 acres, representing about 28 percent of the total 873 acres of the affected properties (refer to Figures 2-9a through 2-9d).

The parcel at the southwest corner of Otay Mesa Road and Alta Road is currently used as a vehicle auction yard; the Two Interchange Alternative would traverse approximately the southern 15 percent of this parcel.

This alternative would also pass through the central portion of a graded parcel immediately west of the vehicle auction yard, which is currently in use for truck storage. The Two Interchange Alternative would bisect this parcel, occupying approximately one quarter of it as part of the Enrico Fermi Drive Interchange.

Four smaller industrial parcels just east of Sanyo Avenue that support three existing industrial buildings adjacent to proposed SR-11 would also be traversed. Two of these parcels are a part of the PG films, LLC (PG Films) four-parcel property located on the north side of proposed SR-11. Another of the traversed parcels also is located to the north of SR-11 and is a part of the LBA Realty Fund III-Company ILLC (LBA Realty) four-parcel property. The parcel on the southern side of SR-11 is a part of a two-parcel property owned by the Sanyo E and E Corporation (Sanyo). The Two Interchange Alternative would require acquisition of approximately 16.1 percent of the PG Films property; approximately 7.5 percent of the LBA Realty property; and approximately 2.1 percent of Sanyo property.

West of Enrico Fermi Drive, SR-11 would lie primarily within the disturbance limits of the Enrico Fermi Drive off-ramp from the SR-905/SR-125 Interchange, previously approved as part of the SR-905 project. Under the SR-11 project, however, proposed property acquisitions in this area would be greater than those approved for the SR-905 off-ramp, and more traffic would be expected. Additional design information is also available for the SR-11 project in this area that was not available at the time of the SR-905 environmental review. Therefore, any land use compatibility impacts of the project alternatives would be considered attributable to the proposed project, rather than previously approved impacts of the SR-905 project.

The proposed R/W acquisition area would not represent a substantial proportion of the 5,000 plus acres of vacant industrial land designated for industrial development and/or vacant improved industrial parcels within the greater Otay Mesa area. The proposed project improvements are required for efficient circulation and access to support the planned build-out of the Otay Mesa area and are represented on the EOMSP in the approximate location of the proposed project. As noted in Sections 3.1, *Existing and Future Land Use*, and 3.4, *Community Character and Cohesion*, the proposed project R/W partial acquisitions would not adversely affect land uses or divide or change the character of the local community in the land use study area or the larger socioeconomic study area.

The partial acquisitions required for project implementation would not involve structure acquisitions, but rather acquisition of land currently used for parking, truck loading/unloading, and similar operations. As noted in Section 3.4, approximately one acre of the partial acquisition area proposed on the PG Films property and a similar one-acre area on the LB Realty property currently comprise a City drainage easement, including steep slopes. The remaining areas of parcel acquisition in this area are currently used for landscaping (in the case of PG Films) and parking (in the case of LB Realty). On the Sanyo property, the proposed acquisition area is mainly landscaped, although a small area (0.10 acre under the Two Interchange Alternative and 0.05 acre under the One and No Interchange Alternatives) is used as a

driveway. Discussions with property owners indicate that these acquisitions would require operational adjustments, but that the businesses would still be able to operate. The acquisition and relocation activities required for the build alternatives would follow all guidelines and regulations in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (as amended). Although some developed industrial property east of Sanyo Avenue would be impacted by the proposed SR-11 R/W, requiring relocation of some business activities to unaffected portions of these parcels, no full business relocations would occur and no employees would be displaced as a result of any of the build alternatives. Any relocation cost directly associated with project implementation would be subject to reimbursement under the RAP. No adverse community or regional economic impacts would result.

As illustrated in Figure 3.27-2, the Two Interchange Alternative would also traverse the following currently proposed private developments on parcels identified in Table 3.5-1 as undeveloped, graded or in temporary use: Saeed TM/Airway Business Center, Dillard and Judd Roll County LLC/Enrico Fermi Industrial Park South County Commerce Center, Otay Mesa Travel Plaza, Bradley/Robertson Copart Salvage Auto Auctions, Otay Crossings Commerce Park, and Otay Business Park (Paragon).

One Interchange Alternative

Under the One Interchange Alternative, the partial acquisition area for the 18 private parcels would be 240.8 acres plus 1.0 acre of the one public agency parcel. The combined total acquisition area would be approximately 241.7 acres, representing about 28 percent of the total 873 acres of the affected properties as compared to the approximate 245 acres under the Two Interchange Alternative. As shown in Figures 2-11a through 2-11d, this alternative would include a full interchange at Alta Road, instead of the interchanges at Enrico Fermi Drive and Siempre Viva Road that are included in the Two Interchange Alternative, which were contemplated in the Western Alternative selected in the Phase I ROD for the proposed project. The single interchange would provide less direct access between SR-11 and surrounding local roadways, although area businesses would still be accessible via local Circulation Element roads.

Because the auxiliary lanes associated with an interchange at Enrico Fermi Drive would not be necessary under the One Interchange Alternative, this alternative would impact smaller portions of developed properties in the Sanyo Avenue area (approximately 14.1 percent instead of 16.1 percent of the PG Films property, 6.6 percent instead of 7.5 percent of the LBA Realty property, and 1.2 percent instead of 2.1 percent of the parcel owned by Sanyo). Property impacts would still be expected to occur, which could require reimbursement under the RAP if business activities within an affected parcel are relocated to an unaffected portion of that parcel. As described for the Two Interchange Alternative, no full residential or business relocations or loss of jobs would be attributable to the One Interchange Alternative.

The One Interchange Alternative would also traverse the same currently proposed private developments described above for the Two Interchange Alternative. The implementation of a single local interchange instead of the two interchanges contemplated in the Phase I ROD for the project would require design adjustments on the part of the property owners of these proposed developments, but as noted above, would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP.

No Interchange Alternative

As shown in Figures 2-12a through 2-12d, the No Interchange Alternative would not include interchanges between the POE/CVEF and the SR-905/SR-125/SR-11 interchange. Vehicles traveling to and from the POE would not have the opportunity to access local roadways to access local businesses. Southbound travelers on SR-125 and eastbound travelers on SR-905 wishing to access local businesses would not be

able to use SR-11 for access, but would have to use the Siempre Viva Road exit from SR-905 and local Circulation Element roads. Similarly, northbound travelers coming from Mexico through the POE would be able to access local area businesses via the Siempre Viva Road exit off SR-905 and local Circulation Element roads. Travelers leaving local area businesses and wishing to cross the border into Mexico through the new POE would have to travel west on local roadways as far as La Media Road, then accessing SR-905 eastbound, and eventually gaining access to eastbound SR-11 and the POE via the SR-905/SR-125/SR-11 interchange. Thus, local area accessibility would be reduced under the No Interchange Alternative compared to the Two and One Interchange alternatives, but would remain viable.

Under the No Interchange Alternative, the partial acquisition area for the 18 private parcels would be 220.2 acres plus 0.3 acre of the one public agency parcel. The combined total acquisition area would be 220.5 acres, representing about 25 percent of the total 873 acres of the affected properties, as compared to the approximate 245 acres under the Two Interchange Alternative and 242 acres under the One Interchange Alternative. Because the auxiliary lanes associated with an interchange at Enrico Fermi Drive would not be necessary under the No Interchange Alternative, this alternative would require smaller acquisitions of developed parcels in the Sanyo Avenue area compared to the Two Interchange Alternative (approximately 14.1 percent instead of 16.1 percent of the PG Films property, 6.6 percent instead of 7.5 percent of the LBA Realty property, and approximately 1.2 percent instead of 2.1 percent of the parcel owned by Sanyo), similar to the One Interchange Alternative. Property impacts would still be expected to occur, which could require reimbursement under the RAP if business activities within an impacted parcel are relocated to an unaffected portion of that parcel. As described for the Two Interchange Alternative, no full residential or business relocations or loss of jobs would be attributable to the No Interchange Alternative.

The No Interchange Alternative would also traverse the same currently proposed private developments described above for the Two Interchange Alternative. The implementation of SR-11 with no local interchanges instead of the two interchanges contemplated in the Phase I ROD for the project would require design adjustments on the part of the property owners of these proposed developments, but as noted above, would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP.

Variations on the Build Alternatives

*No Toll Variation*

Implementation of the No Toll Variation would not involve additional parcel acquisitions, over and above those required for the toll versions of the build alternatives. Therefore, implementation of the No Toll Variation would not alter the conclusions assessed for the project build alternatives with regard to parcel acquisition.

*46-foot Median Variation*

The 46-foot Median Variation would involve slightly (one to two percent) greater partial acquisitions east of Sanyo Avenue, as indicated in Table 3.5-2. For each of the proposed project build alternatives, the baseline design includes a 22-foot median for the portion of SR-11 just east of Sanyo Avenue. As noted above, the total partial acquisition area for the 18 private parcels and 1 public parcel would range from approximately 220 acres to approximately 245 acres, depending on the project alternative.

**Table 3.5-2**
**PARTIAL PARCEL ACQUISITIONS IN THE AREA EAST OF SANYO AVENUE**

| Parcel Owner | Parcel Number | Parcel Size (acres) | Baseline Alternatives with 22-foot Median | | 46-foot Median Variation | |
|---|---|---|---|---|---|---|
| | | | Parcel Acquisition | Percent of Parcel | Parcel Acquisition | Percent of Parcel |
| **Two Interchange Alternative** | | | | | | |
| PG Films, LLC | 646-131-03 | 2.13 | 0 | 0% | 0 | 0% |
| | 646-131-04 | 2.15 | 0.65 | 30.2% | 0.74 | 34.5% |
| | 646-131-05 | 2.19 | 0.72 | 32.8% | 0.81 | 37.1% |
| | 646-131-06 | 2.06 | 0 | 0% | 0 | 0% |
| **Subtotal** | | 8.53 | 1.37 | 16.1% | 1.55 | 18.2% |
| LBA Realty Fund III-Company ILLC | 646-131-09 | 4.27 | 1.36 | 31.9% | 1.54 | 36.1% |
| | 646-131-10 | 4.14 | 0 | 0% | 0 | 0% |
| | 646-131-11 | 3.53 | 0 | 0% | 0 | 0% |
| | 646-131-12 | 6.14 | 0 | 0% | 0 | 0% |
| **Subtotal** | | 18.08 | 1.36 | 7.5% | 1.54 | 8.5% |
| Sanyo E & E Corp. | 646-131-14 | 18.87 | 0.81 | 4.3% | 1.16 | 6.1% |
| | 646-131-17 | 18.86 | 0 | 0% | 0 | 0% |
| **Subtotal** | | 37.73 | 0.81 | 2.1% | 1.16 | 3.1% |
| **Total** | | **64.34** | **3.54** | **5.5%** | **4.25** | **6.6%** |
| **One and No Interchange Alternatives** | | | | | | |
| PG Films, LLC | 646-131-03 | 2.13 | 0 | 0% | 0 | 0% |
| | 646-131-04 | 2.15 | 0.57 | 26.5% | 0.66 | 30.5% |
| | 646-131-05 | 2.19 | 0.63 | 28.6% | 0.72 | 32.8% |
| | 646-131-06 | 2.06 | 0 | 0% | 0 | 0% |
| **Subtotal** | | 8.53 | 1.20 | 14.1% | 1.38 | 16.2% |
| LBA Realty Fund III-Company ILLC | 646-131-09 | 4.27 | 1.19 | 27.9% | 1.37 | 32.0% |
| | 646-131-10 | 4.14 | 0 | 0% | 0 | 0% |
| | 646-131-11 | 3.53 | 0 | 0% | 0 | 0% |
| | 646-131-12 | 6.14 | 0 | 0% | 0 | 0% |
| **Subtotal** | | 18.08 | 1.19 | 6.6% | 1.37 | 7.6% |
| Sanyo E & E Corp. | 646-131-14 | 18.87 | 0.47 | 2.5% | 0.82 | 4.4% |
| | 646-131-17 | 18.86 | 0 | 0% | 0 | 0% |
| **Subtotal** | | 37.73 | 0.47 | 1.2% | 0.82 | 2.2% |
| **Total** | | **64.34** | **2.86** | **4.4%** | **3.57** | **5.5%** |

The 46-foot Median Variation would require acquisition of R/W from the same 19 parcels identified for the proposed project alternatives with the baseline 22-foot median design in the Sanyo Avenue area. The total acquisition area for the 19 parcels under the 46-foot Median Variation would range from 221 acres to 246 acres, depending on the project alternative (refer to Table 3.5-2). This represents approximately one acre more than the respective acquisition areas by alternative for the baseline design involving a 22-foot median. The acquisition area proportion of the affected parcels would range from 25 percent to 28 percent of the total 873 acres, similar to the baseline build alternatives. As noted for the baseline project alternatives involving the 22-foot median, the proposed R/W acquisition area would not represent a substantial proportion of the 5,000 plus acres of vacant raw land and/or improved vacant parcels designated for industrial development within the greater Otay Mesa area.

This variation would result in greater impacts to the developed industrial properties east of Sanyo Avenue for each of the baseline build alternatives, requiring relocation of industrial property/facilities within the

affected parcels. Discussions with affected property owners indicate that this variation would require greater operational adjustments than under the baseline build alternatives, but that the businesses would still be able to operate. This variation would not result in any full residential or business relocations, or a loss of jobs. The construction period impacts associated with the 46-foot Median Variation, however, would also be expected to have a greater impact on normal operations of the businesses in the constrained SR-11 R/W just east of Sanyo Avenue. The acquisition and relocation activities required for the build alternatives would follow all guidelines and regulations in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (as amended) and Title 49 CFR, Part 24, to ensure fair, consistent and equitable treatment in the process of property acquisition. No adverse community or regional economic impacts would result.

*SR-905/SR-125/SR-11 Interchange Variations*

Implementation of the SR-905/SR-125/SR-11 Interchange variations would involve only land already owned by Caltrans and other transportation agencies, and would not require additional private parcel acquisitions, over and above those required for the baseline build alternatives. Therefore, implementation of these variations would not alter the conclusions assessed for the project build alternatives with regard to parcel acquisition.

*Siempre Viva Road Full Interchange Variation*

The Siempre Viva Road Full Interchange Variation would involve slightly greater partial acquisitions of three parcels in the area of Siempre Viva Road, as indicated in Table 3.5-3 below:

**Table 3.5-3**
**PARTIAL PARCEL ACQUISITIONS FOR R/W NEAR SIEMPRE VIVA ROAD**

| Parcel Owner | Parcel Number | Parcel Size (acres) | Two Interchange Alternative with Half Interchange at Siempre Viva Road | | Two Interchange Alternative with Siempre Viva Road Full Interchange Variation | |
|---|---|---|---|---|---|---|
| | | | Acres for R/W Acquisition | Percent of Parcel | Acres for R/W Acquisition | Percent of Parcel |
| Kearny PCCP Otay 311 LLC | 648-070-03 | 158.79 | 27.76 | 17.5% | 43.37 | 27.3% |
| | 648-080-27 | 151.63 | 103.02 | 67.9% | 103.44 | 68.2% |
| **Subtotal:** | | 310.42 | 130.79 | 42.1% | 146.81 | 47.3% |
| Otay Business Park LLC | 648-070-21 | 159.36 | 42.22 | 26.5% | 46.41 | 29.1% |
| **Total** | | 469.78 | 173.00 | 36.8% | 193.22 | 41.1% |

Compared to the Two Interchange Alternative with the half interchange at Siempre Viva Road, the Siempre Road Viva Full Interchange Variation of the Two Interchange Alternative would acquire slightly more land for transportation uses of the affected three parcels (approximately four percent more of the affected parcels). The Siempre Viva Road Full Interchange Variation would result in an additional 20.2 acres of undeveloped land designated for industrial use permanently converted to transportation uses. As noted above, this conversion of existing land would represent a land use impact.

No Build Alternative

Under the No Build Alternative, no R/W acquisitions would occur, so the associated marginal impacts to local business operations related to parcel acquisition would not occur. No impacts to land uses or the community would result. Pending developments in the EOMSP could proceed, however, and the proposed SR-11 R/W and sites for the Otay Mesa East POE and CVEF could become developed with other uses, or local agencies could require developers to reserve land for future long-term implementation of the project; such reserved land area may or may not prove to be adequate at that time. If the project were to be implemented at a later date, greater impacts due to associated parcel acquisitions and/or relocations could result.

**Property Value Impacts**

Property value impacts are not easily quantified without a thorough real estate appraisal for each individual property; they are, therefore, discussed in this EIR/EIS in a general manner.

Build Alternatives

Negative marginal impacts on property values due to construction activities would be temporary and would not be substantial. Potential negative effects could include traffic congestion, dust, noise, traffic detours or visual effects expected to occur during the construction period. These temporary effects would be minimized by implementation of construction best management practices (BMPs) and a TMP.

The build alternatives would generate positive marginal economic benefits derived from improved regional transportation in conformance with adopted regional land use plans. Improved regional transportation performance, better accessibility, and safer, more efficient border crossing operations would result in increased demand for industrial and commercial properties within the local community and the greater San Diego region.

Economic impacts of the proposed project would be beneficial, but would be relatively small compared to the overall size of the San Diego regional economy. Annual total economic impact would be less than 0.5 percent of the San Diego regional economy today. Employment benefits would range from a low of about 800 annual jobs to a high of about 9,200 new jobs created within the regional economy from the reduced border crossing wait times and from the operations staffing at the POE and associated facilities (depending upon whether or not a toll would be charged and the actual border crossing delay reduction that is ultimately achieved). The demand for real property within the region would be expected to increase with the projected growth of the local economy. The resulting countywide property values would likely increase at least proportionately with economic growth, and could exceed the marginal economic growth, because of the finite supply of developable land within the region. As in the rest of the county, property values in the socioeconomic study area would be expected to increase at least proportionately with economic growth, but would also benefit from the enhanced circulation and infrastructure investment in the local community.

Variations on the Build Alternatives

Implementation of the 46-foot Median Variation, the SR-125 Connector Variation, the SR-905/SR-125/SR-11 Full Interchange Variation, or the Siempre Viva Road Full Interchange Variation would not affect the conclusions assessed for the project build alternatives with regard to property value.

The No Toll Variation could lead to decreased use of the existing Otay Mesa POE, which could result in less economic activity in this area.

No Build Alternative

For the No Build Alternative, the regional economy would not benefit from the proposed improvements, the reduced border crossing wait times, and improved local and regional circulation, access, and transportation efficiencies. The inefficiencies in local community and regional circulation, as well as cross-border travel delays, would have a cumulatively negative effect on property values. These negative economic impacts would be marginally adverse, but not substantial, based on the expected border crossing volume and associated border wait times for the 2015 opening year and the 2030 planning horizon year.

**Fiscal Impacts**

Potential fiscal impacts resulting from the proposed project primarily would include increases in property tax revenue and sales tax revenue resulting from increased economic activity within the San Diego region. No fiscal tax losses were identified for the proposed project. Although beneficial fiscal revenues would be generated as a result of the project, they would not represent a substantial benefit to local governments relative to total tax revenues. As discussed below, fiscal impacts would not be substantial for any of the project alternatives or design variations.

Build Alternatives

*Property Tax Impacts*

There would be an initial reduction in property tax revenues with implementation of any of the build alternatives as a result of the acquisitions of privately owned property required by the project R/W and the removal of associated acquisition areas from the tax roll as they change from private to public ownership. No property tax is currently paid by the Otay Water District on the one public parcel requiring part-acquisition for R/W. The estimated reduction in property tax revenue would not be substantial compared to the total countywide FY2009 property tax revenue of $1.8 billion (San Diego County Treasurer-Tax Collector 2009), and would likely be more than offset by the increase in property values generated throughout the local economy as a result of the accrued economic benefits generated from the reduced border crossing wait time.

The total amount of property tax assessed in FY2010 for the 18 privately held impacted parcels was $1,224,853. The Two Interchange Alternative would reduce this property tax revenue level by approximately $282,868; i.e., 23.1 percent of the total annual tax revenue from these parcels (see Table 3.5-4). The One Interchange Alternative would reduce this property tax revenue by an estimated $290,437 (about 23.7 percent), while the No Interchange Alternative would reduce property tax revenue by an estimated $240,456; i.e., 19.6 percent of the total tax revenue from the affected parcels.

**Table 3.5-4**
**ESTIMATED PROPERTY TAX IMPACTS**
**FOR TAXABLE PARCEL PARTIAL ACQUISITIONS BY ALTERNATIVE/VARIATION**

| Project Alternative | Number Of Parcels[1] | Property Tax FY2009 | Loss as Percent of Total Tax | Estimated Property Tax Loss |
|---|---|---|---|---|
| **Baseline Build Alternatives, No Toll Variation, and Interchange Variations** | | | | |
| Two Interchange Alternative | 18 | $1,224,853 | 23.1% | $282,868 |
| One Interchange Alternative | 18 | $1,224,853 | 23.7% | $290,437 |
| No Interchange Alternative | 18 | $1,224,853 | 19.6% | $240,456 |
| **46-foot Median Design Variation** | | | | |
| Two Interchange Alternative | 18 | $1,224,853 | 23.8% | $291,043 |
| One Interchange Alternative | 18 | $1,224,853 | 24.4% | $298,617 |
| No Interchange Alternative | 18 | $1,224,853 | 20.3% | $248,637 |
| **Siempre Viva Road Full Interchange Variation** | | | | |
| Two Interchange Alternative only | 18 | $1,224,853 | 24.6% | $300,827 |
| Two Interchange Alternative with 46-foot Median Variation | 18 | $1,224,853 | 25.2% | $309,002 |
| **No Build Alternative** | 18 | $1,224,853 | 0% | $0 |

[1] No property tax impact would result from partial acquisition of the one tax-exempt public agency-owned parcel and that parcel was not included with the parcels in this table.

*Sales Tax Impacts*

None of the build alternatives, including the possible combinations of one or more design variations, would impact land use elements that would be directly tied to retail sales or the direct generation of sales tax revenue, although temporary uses such as the vehicle auction yard and truck storage may generate limited sales tax revenue. Nevertheless, the proposed project build alternatives would generate regional economic benefits from the reduced border crossing wait times, and would indirectly generate an increase in retail sales and sales tax revenues within the County. The amount of increase in retail sales and sales tax revenue for the regional economy would be beneficial, but not substantial in relation to the current annual $45.6 billion in taxable retail sales for the County.

As noted in Table 3.5-5, the estimated annual indirect sales tax revenue generated by the proposed project build alternatives could reach as high as $4.5 million (on taxable sales of about $52 million) in the 2015 opening year and $7.6 million (on taxable sales of about $87 million) per year by 2030. The resulting sales tax revenues generated by the project build alternatives would be beneficial, but at most would represent about 0.1 percent of the countywide sales tax revenue. No permanent access or sales tax impacts would occur for the retail businesses in the Otay Mesa community as a result of the construction period. No businesses or taxable sales would be displaced as a result of the construction or operation of the proposed project build alternatives. The San Diego region would be expected to benefit marginally from the small, but increased, overall level of retail sales activity.

**Table 3.5-5**
**ESTIMATED ANNUAL SALES TAX REVENUE GENERATED BY ALTERNATIVE/VARIATION, 2015 AND 2030**

| Project Alternative/Year | Sales Tax (in Millions) |
|---|---|
| **Build Alternatives** | |
| By 2015 | $4.5 |
| By 2030 | $7.6 |
| **No Toll Variation** | |
| By 2015 | $0.4 |
| By 2030 | $0.5 |
| **46-foot Median and All Interchange Variations** | |
| By 2015 | $4.5 |
| By 2030 | $7.6 |
| **No Build Alternative** | $ 0 |

Variations on the Build Alternatives

*No Toll Variation*

Implementation of the No Toll Variation would not alter the conclusions reached for the project build alternatives with regard to property tax revenues. This variation would involve the same acquisitions of privately owned, property tax-generating parcels.

Implementation of the No Toll Variation would result in less sales tax revenue than the proposed project with a toll. This is because the toll itself is not a sales tax, but its removal would mean that border wait times for commercial vehicles would not be reduced to the same degree and consequent regional economic benefits (and associated sales tax revenue) would not be as high as would be expected under the toll alternatives. The estimated annual indirect sales tax revenue generated by the proposed project build alternatives without a toll would be in the range of $400,000, compared with revenues of up to $4.5 million with toll in the 2015 opening year. By 2030, the estimated annual indirect sales tax revenue would be in the range of $500,000 without the toll, as compared to $7.6 million with the toll. Nonetheless, because this difference would represent so small a portion of regional sales tax revenue, implementation of the No Toll Variation would not alter the conclusions reached for the project build alternatives with regard to sales tax revenues.

*46-foot Median Variation*

For the 46-foot Median Variation, the increase in tax loss over the baseline project build alternatives would be less than $9,000 in each case. Implementation of the Two Interchange Alternative with the 46-foot Median Variation would result in a tax loss of $291,043, or 23.8 percent of the total property tax paid on these parcels. For the One Interchange Alternative with the 46-foot Median Variation, the property tax loss would be $298,617, or 24.4 percent. Implementation of the No Interchange Alternative with the 46-foot Median Variation would result in a decrease in property tax revenue of $248,637, or about 20.3 percent of the total property taxes paid by the 18 privately held parcels that would be affected.

The resulting decrease in property tax revenues would represent less than 0.1 percent of total property tax revenue and would not be a substantial fiscal impact for the City or the County.

Implementation of the 46-foot Median Variation would not alter the conclusions associated with the project build alternatives with regard to sales tax revenues.

*SR-905/SR-125/SR-11 Interchange Variations*

Implementation of the SR-905/SR-125/SR-11 Interchange design variations would not alter the conclusions identified for the project build alternatives with regard to property tax revenues and sales tax revenues. None of these variations would involve acquisitions of privately owned, tax generating parcels.

Siempre Viva Road Full Interchange Variation

The Siempre Viva Road Full Interchange Variation would apply only to the Two Interchange Alternative. The increase in property tax loss compared to the baseline Two Interchange Alternative would be less than $18,000. Implementation of the Two Interchange Alternative with the Siempre Viva Road Full Interchange Variation would result in a total initial property tax loss of $300,827, or 24.6 percent of the total property tax paid on the 18 affected privately held parcels. The maximum property tax impact of $309,002 (25.2 percent) would occur for the Two Interchange Alternative with the Siempre Viva Road Full Interchange Variation combined with the 46-foot Median Variation.

The resulting decrease in property tax revenues would represent less than 0.1 percent of total property tax revenue and would not be a substantial fiscal impact for the City or the County.

Implementation of the Siempre Viva Road Full Interchange Variation would not alter the conclusions reached for the Two Interchange Alternative with regard to sales tax revenues.

No Build Alternative

Because there would be no action, there would be no property tax or sales tax loss or benefit under the No Build Alternative.

### 3.5.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives**

Impacts of any of the build alternatives relating to relocations or property acquisitions would be avoided, minimized or mitigated through conformance with Caltrans' Relocation Assistance Program (RAP), which is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24.

**Variations on the Build Alternatives**

Impacts of any of the build variations relating to relocations or property acquisitions would be avoided, minimized or mitigated through conformance with Caltrans' Relocation Assistance Program (RAP), which is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24.

**No Build Alternative**

Under the No Build Alternative, substantial economic benefits would not be realized. However, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

# 3.6 ENVIRONMENTAL JUSTICE

This section discusses the likely impacts of the proposed project on minority and low-income populations in the socioeconomic study area, and is based on the project CIA (HELIX/CIC Research 2010).

## 3.6.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the HHS poverty guidelines. For 2009, this was $22,050 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix G of this document.

## 3.6.2 Affected Environment

The environmental justice evaluation in this section is based on the demographic information presented in Section 3.4, *Community Character and Cohesion*, including the population, employment and housing information summarized in Table 3.4-1. As previously noted, the proposed project would be located in CT 100.15, which encompasses the area in the vicinity of the project as well as the regional area most likely to be affected by the proposed project (refer to Figure 3.3-1). CT 100.15, which is designated as the project socioeconomic study area, has a very high (96 percent) minority population. According to the 2000 Census, the residents in the census tract were 94 percent Hispanic (compared to 27 percent Hispanic in San Diego County overall) and 2 percent other minorities, with 4 percent White Non-Hispanic residents (compared to 55 percent countywide).

The 2000 Census data and estimated household income data for 2008 were used to identify low-income populations. Residents in CT 100.15 have a lower median household income than residents countywide. In the 2000 Census, the population of the socioeconomic study area had a median household income of $29,723, which was 37 percent lower than the countywide median household income of $47,067. The 2008 SANDAG estimated median household income for CT 100.15 was $39,745, which was 42 percent lower than the countywide estimated median household income of $68,470. Based on economic analysis, approximately 27 percent of families with children in CT 100.15 reported incomes below the 2009 federal poverty guideline of $22,050 for a family of four, more than twice the countywide level of approximately 11 percent. Therefore, a low-income population is present within the census tract at a much higher level than the percentage identified throughout the county.

In terms of identifying persons who live in geographic proximity, existing residential communities are more than 1.5 miles from the proposed project. Only a few residences have been identified in the immediate vicinity of the project. These are primarily in a cluster along Otay Mesa Road, approximately 1,000 feet north of SR-11, in the census tract north of CT 100.15. Another house is located just beyond the land use study area, approximately 2,200 feet west of the terminus of the project modifications to SR-905 at the Britannia Boulevard Interchange. In addition, a few other isolated single-family residences are located one or more miles from the proposed project in areas to the north and west (beyond the limits of the land use study area). The minority or low-income status of the residents in the three closest homes has not been determined, due to privacy considerations.

### 3.6.3 Environmental Consequences

As discussed above in Section 3.6.2, *Affected Environment*, CT 100.15 has a very high percentage minority population. In addition, a low-income population is present within the census tract at a much higher level than the average percentage identified for the County. Therefore, adverse socioeconomic impacts of the proposed project would be considered to fall disproportionately on minority and low-income populations.

The Caltrans Environmental Justice in Transportation Planning and Investments Desk Guide (Desk Guide; ICF Consulting [ICF] 2003) notes that, "The determination of whether a transportation project will have a disproportionately high and adverse impact is at once perhaps the most critical yet least well-defined aspect of environmental justice assessment." The Desk Guide recommends that the impacts of a proposed project on minority and low-income communities be evaluated in comparison to the impacts to the general population, although the determination of whether an impact is adverse should not turn solely on the size of the affected population. In the case of the proposed project, the residential population in general in the census tract encompassing the socioeconomic study area has been identified as a minority and low-income population. Therefore, project impacts and benefits would accrue to both types of populations of concern for environmental justice.

Based on technical analysis conducted to evaluate potential impacts of the proposed project, adverse impacts related to land use, traffic, aesthetics, noise and biological resources would occur, although identified measures would avoid, minimize or mitigate these impacts. In some cases (such as noise and aesthetics), these impacts would be localized within the land use study area, which is industrial in nature and has no residential population. However, because less localized potential impacts could fall primarily on a minority and low-income population within the socioeconomic study area, EO 12898 requires that extensive outreach efforts be made to the affected community, to educate the community regarding the project and its potential impacts, and receive public input regarding the development of the project. Community outreach efforts have included the scoping meeting and public meetings for Phase I and the public scoping meeting for Tier II, meeting notices in Spanish, interpreters at public meetings, and meetings with local stakeholders as discussed below in Section 5.2.2, *Public Meetings*. Public involvement/community outreach efforts conducted for the proposed project that focused on reaching minority and low-income populations include the following:

- In Phase I, the Notice of Public Meeting for the Public Scoping Meeting held on June 6, 2007 was published in the San Diego Union Tribune in English and the *Hispanos Unidos* newspaper in Spanish. The Notice of Public Meeting for the public meeting for the Draft PEIR/PEIS held on February 20, 2008 was published in the *San Diego Union Tribune* in English and Spanish. A Spanish interpreter was available to translate for Spanish-speaking attendees.

- Notices of the Tier II Public Scoping Meeting held on December 4, 2008 from 5:00 p.m. to 7:30 p.m. were mailed to the cooperating/participating agencies, state, federal and local agencies, Mexican agencies with an interest in the program, elected officials, and members of the public. The Notice of Public Meeting was published in the South County Edition of the *Union Tribune* on November 20, 2008 in both English and Spanish editions. A Spanish interpreter was made available at the Public Meeting to translate for Spanish-speaking attendees.

- Numerous meetings have been held with members of public agencies and stakeholders, as documented in Chapter 5.0 of this EIR/EIS.

Development of the project alternatives reflects input received from the community, consistent with the requirements of EO 12898.

The proposed project would generate many benefits in the region. In general, all build alternatives of the proposed project would provide a regional transportation facility that would draw commercial vehicles away from local streets and route this traffic more efficiently to and from the international border. Most of the project construction would occur on undeveloped, vacant land planned for industrial uses or within existing highway R/W. The improvement in the regional transportation system would enhance existing and future development along local roads by reducing congestion and emissions from commercial vehicles, particularly large trucks. Regional through-trips to and from the international border made on local streets by personal vehicles and buses would be routed to the proposed project, further reducing existing congestion. Specific benefits of the proposed project to the minority, low-income population in the census tract that encompasses the project would include the following:

- Reduced border wait times for pedestrians, personal vehicles, and commercial vehicles at the new POE
- Reduced border wait times at existing POEs due to diversion to the new POE
- Increased border crossing choice for drivers and pedestrians provided by a third POE
- Increased POE options in the event of a disaster or other emergency requiring closure of a POE
- Reduced traffic congestion on many local streets
- Reduced numbers of large trucks on local streets
- Reduced idling of vehicles waiting to cross the border
- Enhancement of the local, regional, and national economy due to reduced border wait times for commercial and personal crossings[1]
- Creation of a more inviting environment for retail, commercial, office, industrial, and other development along local roads
- Direct and indirect creation of jobs, including short-term construction jobs and long-term employment opportunities[2]

For all build alternatives that would involve a toll for vehicles using SR-11, the potential for hardship to the low-income population must be examined. For these alternatives, the toll that would be implemented for vehicles would not deny receipt of benefits or make the project inaccessible to a low-income population for the following reasons:

[1] The analysis in the project CIA (HELIX/CIC Research 2010) indicates that the total annual economic output generated in 2015 by the reduced border wait times for commercial border crossings as a result of any of the build alternatives (with toll) would range from a low estimate of $177 million and 940 jobs for the San Diego regional economy to a high of $971 million and 5,255 jobs. On a national level, economic output and employment generated would be approximately three times these figures.

By the project horizon year of 2035, the total annual economic output generated by the reduced border wait time for commercial border crossings as a result of any of the build alternatives would range from a low estimate of $297 million and 1,575 jobs for the San Diego regional economy to a high of $1.63 billion and 8,807 jobs. On a national level, economic output and employment generated would be approximately three times these figures.

[2] The analysis in the project CIA (HELIX/CIC Research 2010) indicates that the Two Interchange Alternative is projected to produce an estimated total output impact of $584.5 million, 4,638 total jobs, and a total income of $255.3 million throughout the regional economy. The One Interchange Alternative is projected to produce an estimated total output impact of $573.1 million, 4,552 total jobs, and a total income of $250.5 million. The No Interchange Alternative is projected to produce an estimated total output impact of $557.3 million, 4,433 total jobs, and a total income of $243.8 million. The SR-125 Connector Variation is projected to add an estimated total output impact of $24.7 million, 310 total jobs, and an additional total income of $17.4 million to any of the baseline project build alternatives. The Full Interchange Variation is projected to add an estimated total output impact of $67.3 million, 844 total jobs, and an additional total income of $47.4 million to any of the baseline project build alternatives.

- There would be no toll associated with crossing the international border at the San Ysidro and Otay Mesa POEs (as under existing conditions), and the existing Otay Mesa POE is only one mile away from the new POE
- Both existing POEs are projected to experience a reduction in border wait times due to provision of a third POE, which would benefit users of the existing POEs
- No toll would be charged to pedestrians crossing the international border at the new POE
- Other road facilities would provide alternative, non-toll access to similar areas in Otay Mesa
- Economic benefits of the project would be experienced by the entire population, regardless of the toll
- Economic benefits to the region and the nation are predicted to be greater with a toll facility because of reduced border wait times at the new POE

The discussion below evaluates the toll issue associated with each of the different alternatives.

**Two Interchange Alternative**

For this alternative, toll facilities would be located at the Enrico Fermi Drive Interchange and just west of the new POE. Drivers for whom the toll would be a hardship would travel on existing surface streets and cross the border at the existing POEs, as under existing conditions. Drivers not crossing the border would not access SR-11 if the toll would be a hardship. However, drivers amenable to paying a toll would have the option to use SR-11 to access Enrico Fermi Drive or Siempre Viva Road as well as the new POE. To the extent that such local access would be a benefit, this alternative would be the least accessible to low income populations because of the toll. However, all of the regional project benefits listed above would be experienced by both minority and low-income populations in the socioeconomic study area. Overall, no substantial impacts would be expected to fall disproportionately on the minority and low-income populations in the socioeconomic study area, these populations would experience substantial benefits from the Two Interchange Alternative, and appropriate public involvement/community outreach efforts were conducted for the proposed project.

**One Interchange Alternative**

For this alternative, toll facilities would be located at the Alta Road Interchange and just west of the new POE. There would be no direct access to other local roadways such as Enrico Fermi Drive or Siempre Viva Road from SR-11. As with the Two Interchange Alternative, drivers for whom the toll would be a hardship would not use SR-11 and would cross the border at the existing POEs instead. Drivers amenable to paying a toll could use SR-11 to access Alta Road. However, this project design would represent less of a local access benefit because there would be only one interchange. As in the case of the Two Interchange Alternative, all of the regional project benefits listed above would be experienced by both minority and low-income populations in the socioeconomic study area under the One Interchange Alternative. Overall, no substantial impacts would be expected to fall disproportionately on the minority and low-income populations in the socioeconomic study area, these populations would experience substantial benefits from the One Interchange Alternative, and appropriate public involvement/community outreach efforts were conducted for the proposed project.

**No Interchange Alternative**

For this alternative, toll facilities would be located just west of the new POE. As for the other two alternatives, drivers for whom the toll would be a hardship would cross the border at the existing POEs. Drivers not crossing the international border would not have a reason to access SR-11 because local roads would not be accessible from SR-11. This design would tend to inhibit local users of the new regional transportation system because of its lack of connection to local roads, not because of issues associated with a toll. As in the case of the other two alternatives, all of the regional project benefits listed above would be experienced by both minority and low-income populations in the socioeconomic study area

under the No Interchange Alternative. Overall, no substantial impacts would be expected to fall disproportionately on the minority and low-income populations in the socioeconomic study area, these populations would experience substantial benefits from the No Interchange Alternative, and appropriate public involvement/community outreach efforts were conducted for the proposed project.

**Variations on the Build Alternatives**

No Toll Variation

The No Toll Variation, which could apply to any of the three build alternatives, would involve the SR-11 corridor operating as a freeway instead of a toll highway. Drivers would not have to choose surface streets versus SR-11, or the existing POEs versus the new POE because of the toll. This variation of the Two Interchange Alternative would be the most accessible to low income populations (compared to the No Toll Variation of the One or No Interchange alternatives). However, economic analysis indicates that the No Toll Variation would result in decreased overall economic benefits compared to the toll alternatives because there would be less reduction in border wait times. Therefore, the regional and national economic benefits would be less for the No Toll Variation. Overall, no substantial impacts would be expected to fall disproportionately on the minority and low-income populations in the socioeconomic study area, these populations would experience substantial benefits from the project under the No Toll Variation, and appropriate public involvement/community outreach efforts were conducted for the proposed project.

46-foot Median Variation, SR-905/SR-125SR-11 Interchange Variations, and Siempre Viva Road Full Interchange Variation

These design variations would not be expected to affect the environmental justice impact analysis discussed above for the Two, One and No Interchange alternatives. As noted above, no substantial impacts would be expected to fall disproportionately on the minority and low-income populations in the socioeconomic study area, these populations would experience substantial benefits from the project under these design variations, and appropriate public involvement/community outreach efforts were conducted for the proposed project.

**No Build Alternative**

Under the No Build Alternative, the project site would remain undeveloped; no new environmental impacts would occur. Under the No Build Alternative, however, drivers would not have an alternative crossing location to the existing congested POEs, and traffic (including large trucks) would not be diverted from local streets to SR-11. The existing population would continue to experience the impacts associated with border wait times and growing traffic congestion. Because the San Ysidro POE is located in a community of primarily low-income, minority residents, the impacts of excessive congestion would tend to fall primarily on this population; therefore, marginally adverse environmental justice impacts would be expected to result from the No Build Alternative. The beneficial impacts that would be expected to result from the build alternative would not be realized under the No Build Alternative.

### 3.6.4 Avoidance, Minimization and/or Mitigation Measures

For implementation of any of the build alternatives and variations, no substantial impacts would be expected to fall disproportionately on the minority and low-income populations in the socioeconomic study area, these populations would experience substantial benefits from the project, and appropriate public involvement/community outreach efforts were conducted for the proposed project.

### Build Alternatives

Because no adverse environmental justice impacts would result from implementation of the build alternatives, no avoidance, minimization, or mitigation measures would be required.

### Variations on the Build Alternatives

Because no adverse environmental justice impacts would result from implementation of the 46-foot Median Variation, the SR-125 Connector Variation, the SR-905/SR-125/SR-11 Full Interchange Variation, or the Siempre Viva Road Full Interchange Variation, no avoidance, minimization, or mitigation measures would be required.

While the regional and national economic benefits would be less under the No Toll Variation, no adverse environmental justice impacts would result from its implementation. Accordingly, no avoidance, minimization, or mitigation measures would be required.

### No Build Alternative

Under the No Build Alternative, cross border traffic would not be diverted from the existing congested POEs to the proposed Otay Mesa East POE. Nevertheless, because no action would occur, no avoidance, minimization, or mitigation measures would be required.

Based on the above discussion and analysis, the project build alternatives and variations would not cause disproportionately high and adverse effects on any minority or low-income populations as per EO 12898 regarding environmental justice.

# 3.7 UTILITIES/EMERGENCY SERVICES

## 3.7.1 Regulatory Setting

Public utilities, such as water and gas distribution pipelines, are often placed within streets that are franchised public R/W. Therefore, disturbing a street or the utilities underneath could affect utility levels of service. Pursuant to California Public Utilities Code (PUC), "A district may construct works across or along any street or public highway, or over any of the lands which are the property of the state, and it shall have the same rights and privileges appertaining thereto as are granted to municipalities within the state. The district shall restore any such street or highway to its former state as near as may be…and shall not use it in a manner to unnecessarily impair its usefulness" (California PUC, Section 12808).

## 3.7.2 Affected Environment

Utilities that could be affected by project implementation are those that occur within the footprints of the proposed SR-11, POE, and CVEF.

### Utilities

The Otay Mesa and Otay Mesa East POE Feasibility Study (GSA 2008) notes that the Otay Mesa East POE site is currently undeveloped, with existing utilities to be extended from the nearest service locations. A number of existing utility lines are present within the study area (including portions of the POE/CVEF sites and the SR-11 corridor), and could potentially be impacted by project implementation. Specific anticipated utility needs for the project include water, sewer, electricity, natural gas, and telecommunications. A summary of existing and projected utility services in the project study area is provided below.

Water

Water service in the study area and vicinity is provided by OWD. The ability of the OWD to provide water to the project for the next 20 years, as required by Senate Bill (SB) 610, is directly linked to the ability of the San Diego County Water Authority (SDCWA) to purchase sufficient water from the Metropolitan Water District of Southern California (MWD), with MWD dependent upon the sufficiency of water deliveries from its existing water supply. The MWD existing water supply consists of deliveries from the Colorado River via the Colorado River Aqueduct, and northern California via the State Water Project (SWP). In addition, MWD has obtained water from supplemental sources over the years to augment the main supplies, including the Imperial Irrigation District/Water Authority Transfer, and the Coachella and All-American Canal Lining Projects (MWD 2005). Potential future water supply projects include a proposed desalination plant in Carlsbad.

Water is supplied to the study area region through Pipeline No. 3 of the SDCWA Second San Diego Aqueduct, which flows from north to south. The water supply is conveyed by gravity flow through a 24-inch transmission main to the 571-1 Reservoir at the terminus of the aqueduct (Montgomery Watson 1995). Existing distribution lines provide water to local facilities in the study area vicinity, including the Donovan State Prison, County detention facilities, business/industrial sites, the existing Otay Mesa POE/CVEF, and residences along Otay Mesa Road. Local distribution lines also provide emergency water service to Mexico. Existing water lines in the project study area and vicinity are summarized below:

- 16-inch-/12-inch-diameter asbestos cement pipe (ACP) potable water pipeline in Alta Road
- 24-inch-diameter ACP potable water pipeline in Alta Road
- 12-inch-diameter polyvinyl chloride (PVC) potable water pipeline in Enrico Fermi Drive
- Recycled water pipeline in Sanyo Avenue
- 12-inch-diameter ACP potable water pipeline in Via de la Amistad
- 12-inch-diameter ACP potable water pipeline in Airway Road

Recycled Water

OWD policy requires the use of recycled water for parks and landscaping irrigation needs, and encompasses an Incremental Interruption and Conservation Program which would be triggered by regional water shortages and other consumption-reducing circumstances (OWD 1984). Existing recycled water production within the OWD occurs at the Ralph W. Chapman Water Recycling Facility, with additional supplies purchased from the City of San Diego South Bay Water Reclamation Plant. These two sources currently provide a combined total of approximately 7 mgd of recycled water in the OWD service area (OWD 2005). Recycled water lines currently exist in the Sanyo Avenue area. While OWD requires construction of separate recycled water distribution systems to serve everyday irrigation demands, sufficient supplies of recycled water are not yet available in the OWD service area. As a result, several existing recycled water systems will continue to be used for potable water distribution until additional recycled water supplies become available. Current plans to provide recycled water to meet projected demands include the expanded use of advanced treatment at local wastewater treatment plants.

Sewer

The project study area is located within the City of San Diego's Metro Sewer system (Metro System), which serves over 2.2 million people in San Diego (including the City of San Diego, 15 other cities and districts, and the County of San Diego). The Metro System service area includes 450 square miles and provides treatment for an average of 180 million gallons per day (mgd) of wastewater at the Point Loma Wastewater Treatment Plant (WWTP) with a capacity of 240 mgd (City 2010).

Sewer service in the County portion of the project area is provided by the County's Wastewater Management (WWM) Section through the East Otay Mesa Sewer Maintenance District (EOMSMD) which was formed to collect fees required to obtain service through the Metro System. Wastewater flows originating within the EOMSMD are collected and transmitted through the Otay Mesa Trunk Sewer (OMTS) to the Point Loma WWTP for treatment and disposal. Currently, the EOMSMD has the rights to send 1.0 mgd to the Point Loma WWTP, with this capacity purchased from the Spring Valley Sanitation District. It is estimated that buildout of the EOMSP will require a total sewer capacity of approximately 4 mgd. The 1.0 mgd purchased by the EOMSMD is intended to accommodate the initial 400 acres of industrial development within the EOMSP.

Solid Waste

The solid waste disposal facility that currently serves Otay Mesa is the Otay Landfill, located in the City of Chula Vista. As of November 2006, this landfill had a remaining capacity of 33,070,879 cubic yards and its estimated cease-to-operate date is in 2021 (California Integrated Waste Management Board 2009).

California's Integrated Waste Management Act of 1989 (AB 939) requires that local jurisdictions within the state divert at least 50 percent of solid waste from landfills. To implement this goal, the City and the County mandate recycling for residential, commercial, industrial and government uses. In addition, both

jurisdictions require reductions in solid waste generated by projects with construction and demolition areas of 40,000 sf or greater. Within the County, 90 percent of inert construction and demolition debris and 70 percent of all other construction and demolition debris is required to be diverted. The City requires a 50 percent diversion rate for all construction and demolition debris.

Gas, Electricity and Fuel

Gas and electric service within the project study area and vicinity is provided by Sempra Energy Company (Sempra). An electrical transmission line within a 120-foot-wide easement extends northwest from the border near the eastern edge of the project study area. All other electric utility lines in the EOMSP area are required to be placed underground in roadways. Sempra also has a 30-inch-diameter, 800-pounds per square inch (psi) underground gas pipeline within Enrico Fermi Drive and Via de la Amistad. This gas pipeline is within a 42-foot easement and extends through the southern portion of the proposed POE site. A 24-inch fuel line owned by Calpine Corporation is located within a 20-foot easement that extends through the eastern portion of the proposed POE and CVEF sites. Electricity and natural gas utilities exist within several of the existing roadways that cross the proposed SR-11 R/W, including Harvest Road, Sanyo Avenue, Dornoch Court, Otay Mesa Road, and Piper Ranch Road.

Telecommunications

Telephone service in the area is provided by AT&T. Phone lines parallel Otay Mesa Road, Airway Road, Sanyo Avenue and Enrico Fermi Drive. Additionally, combination gas and television lines are located in Enrico Fermi Drive and Airway Road.

**Emergency Services**

Emergency services typically provided for public safety include police protection, fire protection, and emergency medical services. These services are summarized below.

Police Protection Services

Police protection services for the portion of the study area within the City of San Diego are provided by the San Diego Police Department - Southern Division office, located at 1120 27th Street (approximately 10 miles to the west near I-5). The Southern Division serves the southern portion of the City of San Diego, including the communities of Otay Mesa, Otay Mesa West, and San Ysidro.

The County Sheriff's Department provides generalized patrol and law enforcement investigative services in the unincorporated areas of the County, which encompass approximately 4,200 square miles. The nearest sheriff's station to the project study area is the Imperial Beach Station, located approximately 12 miles to the west. Most patrol functions in the study area vicinity are conducted by one of the two to three patrol units assigned to the Otay Mesa area. In urban unincorporated areas, such as East Otay Mesa, minimum response times identified in the County General Plan are 8 minutes for priority calls and 16 minutes for non-priority calls. Current response times in the East Otay Mesa area are less than eight minutes for first priority calls from the Imperial Beach Sheriff's Station (Parker 2006), which meets the County General Plan standard.

The demand for police services in the vicinity of the project study area is expected to increase as currently approved and proposed local development projects are implemented. The Public Facilities Element of the General Plan notes that there is a need to locate a Sheriff's substation in the East Otay Mesa area after the onset of development. Also, the Sheriff's Department has indicated the need for a new sheriff's station in the unincorporated South Bay area to improve local service levels (Parker 2006). A temporary sheriff

facility is currently operational at the intersection of Otay Mesa Road and Enrico Fermi Drive (Mays 2010). A permanent 6,000-square foot sheriff's station is planned to be co-located with a future fire station at the terminus of Enrico Fermi Drive. Both facilities would be constructed as determined necessary dependent upon the pace of development. Funding for the new substation would be accomplished through the establishment of a new sheriff-fire community facilities district (CFD) for developing properties within the East Otay Mesa area (County 2009b). This planned sheriff's station would provide the necessary services to satisfy the expected increase in demand due to anticipated cumulative development in the area.

Traffic enforcement services in the unincorporated portion of the County are provided by the CHP. The proposed project is located within the CHP's Border Division, which includes Imperial, Riverside, Orange and San Diego counties, and employs 900 uniformed officers and 380 non-uniformed personnel. CHP officers are responsible for investigating and disposing of car accidents, debris, and other impediments to the free flow of traffic on all roadways in their jurisdiction, including California state routes, U.S. highways, interstate highways, freeways in the state, and all public roads in unincorporated parts of a county. The CHP also operates a CVEF located along Enrico Fermi Drive in the study area vicinity, which inspects thousands of trucks yearly to confirm that they are mechanically ready for California's highways. Other law enforcement functions of the CHP include working to intercept and recover stolen vehicles driven across the border for sale in Mexico and other countries.

The Border Patrol, which is the mobile, uniformed, law enforcement arm of the federal DHS, provides additional law enforcement services in the project study area and vicinity. Its priority mission is preventing terrorists and terrorist weapons from entering the U.S. In addition, the Border Patrol maintains its traditional mission of preventing the entry and smuggling of illegal immigrants, narcotics, and other contraband into the U.S. between official ports of entry. Border Patrol agents and vehicles regularly patrol the project study area and vicinity.

Fire Protection Services

The City of San Diego Fire-Rescue Department Otay Mesa Station 43, located at the intersection of Otay Mesa and La Media roads, provides fire protection services to the City portion of the project study area.

Fire protection in the County portion of the study area is provided by the San Diego Rural Fire Protection District (SDRFPD). The SDRFPD, City of San Diego, City of Chula Vista, County of San Diego, and Donovan State Prison are signatories to the San Diego County Fire Mutual Aid Agreement, which identifies when and how the various fire departments and other entities will assist each other in emergencies. In addition to fire services provided by the SDRFPD, the California Department of Forestry responds to wildland fires in East Otay Mesa.

There are two SDRFPD fire stations in the vicinity of the project study area: (1) Station 26, which is located at Donovan State Prison; and (2) Station 22 (opened October 3, 2007), which is an interim fire station at the George F. Bailey Detention Facility and is staffed by California Department of Forestry and Fire Protection (CAL FIRE) personnel as part of a cooperative agreement. Station 22 provides full-service fire suppression, rescue and emergency medical services. It is anticipated that Station 22 will operate until operations move to the previously described sheriff/fire facility to be located at the Enrico Fermi Drive/Otay Mesa Road intersection.

Emergency Medical Services

San Diego Medical Services Enterprise (SDMSE), a public/private partnership formed as a limited liability company between the City of San Diego and Rural/Metro Ambulance Emergency, provides

medical services in the project study area and vicinity. A paramedic responder is available at Station 43. The nearest Emergency Medical Technician is stationed at Fire Station 29, which is located near the I-805/I-5 junction, with this location also providing ambulance service. SDMSE has a mutual aid agreement with the County of San Diego, and responds to medical emergencies within applicable portions of both the City and County (Johnson 2007).

### 3.7.3 Environmental Consequences

**Build Alternatives**

Two Interchange Alternative

*Utilities*

For planned utilities, to the extent that development plans for currently vacant parcels have proposed utilities within the SR-11 corridor, these plans would require modification to avoid the highway corridor. The EOMSP Amendment (County of San Diego 2007a), however, requires the use of all land in the Specific Plan Area to conform with the applicable regulatory provisions in the Specific Plan, including the provision that the "north-south boundaries of adjacent land uses are intended to conform with the final alignment of future SR-11." Similarly, to the extent that development plans for currently vacant parcels have proposed utilities within the adopted boundaries of the POE and/or CVEF sites, these plans would be replaced by future plans for the POE/CVEF facilities, with the POE identified as a planned use within the EOMSP. Therefore, planned utilities would need to be adjusted to accommodate the project before they would be constructed, and impacts would not occur.

For existing utilities, project implementation could affect buried water, sewer, electrical, telecommunication, gas and fuel lines, as well as overhead telecommunication and power lines within the project study area. These include utilities that extend east-west in the SR-11 and SR-905 corridors, as well as those that trend north-south, such as through the R/W of Alta Road, Enrico Fermi Drive, Sanyo Avenue, and Harvest Road. The 30-inch diameter gas pipeline in Via de la Amistad extends through the southern portion of the proposed POE site. In addition, a 24-inch gas line that connects with the power generation facility on Alta Road extends through the eastern portion of the POE/CVEF sites.

Project implementation could impact these utilities through disruption of access, construction of conflicting utilities, or changes in topography that would expose the buried pipelines or place excessive fill on them. However, appropriate measures would be incorporated into the design to provide and restore access, and protect the pipelines in place or relocate them, in consultation with the utilities providers. Any disruptions would be short-term, and temporary connections to services would be provided to customers during construction. It is expected that these pipelines would be relocated within the proposed project R/W or within other developed public R/W.

The SR-905 project (under construction) includes the relocation of underground water, gas, electrical, and telephone lines at Britannia Boulevard and La Media Road within the proposed project's footprint. The SR-905 project also includes relocation of an underground water line and encasement of an underground sewer line to the east of Britannia Boulevard. The proposed project would not impact these utilities as they are planned to be underground. In addition, coordination would occur with the utility companies prior to any construction in this area to ensure that these existing utilities would not be impacted by construction of the project.

The project would require new infrastructure. All necessary utilities would be extended from existing service locations to appropriate locations within the SR-11 and SR-905 corridors and the POE/CVEF

sites. It is anticipated that new infrastructure would be placed within existing and planned roadway rights-of-way, and that no new footprints would be impacted.

Wastewater generated by the proposed development would ultimately flow into the OMTS and be treated at the Point Loma WWTP.

Construction and demolition, as well as operation of the proposed project, would generate solid waste that would be disposed of in the Otay Landfill. Recycling receptacles would be located on the POE and CVEF sites in order to reduce the amount of operational waste sent to the landfill. Most excess fill and construction and demolition debris would be reused or recycled. Removed concrete and asphalt materials would be reused as fill material on the project site. Vegetation, lumber, and metal debris would be hauled offsssite for composting or recycling, as appropriate. Some demolition debris would require special handling and disposal due to potential hazardous materials (see Section 3.15, *Hazardous Waste* Materials). Implementation of these reuse and recycling measures would minimize impacts to the remaining capacity at the Otay Landfill.

*Emergency Services*

Construction of the western portion of SR-11 could temporarily disrupt travel along existing roadways within the highway construction zone, potentially affecting emergency response times. Construction of the POE and CVEF would be in an area without existing roadways traveled by emergency vehicles, and therefore would not impact emergency services for the general public. Upon completion of SR-11, emergency response times on local public roadways would be improved by the provision of the SR-11 highway and reduction of congestion on local roads, which would represent a project benefit to local public safety conditions.

Between the proposed Otay Mesa East and Otay II POEs is a 150-foot wide strip of CBP land that stretches along the north side of the border, and is patrolled by the U.S. Border Patrol for immigration and border law enforcement purposes. These U.S, Border Patrol activities could be disrupted during construction of the roadway connections across the CBP land to connect the proposed POE with the Otay II POE across the international border.

<u>One Interchange Alternative</u>

The One Interchange Alternative would cross over the same rights-of-way as the Two Interchange Alternative, but the extent of disturbance would vary between the two alternatives. Without an interchange at Enrico Fermi Drive, the area of disturbance affecting the water and sewer lines would be smaller at this point and less of the existing utility lines in Enrico Fermi Drive would be impacted, while potentially more disturbance could occur at the proposed Alta Road Interchange in this location, with a corresponding greater effect upon the existing and planned water lines in this area. Potential impacts to emergency services would be similar to those described for the Two Interchange Alternative.

<u>No Interchange Alternative</u>

The No Interchange Alternative would impact the same utility lines as the Two Interchange and One Interchange alternatives. The areas of disturbance at Enrico Fermi Drive and Alta Road would be somewhat less than the other build alternatives because the additional disturbance for interchanges would not be required. Potential impacts to emergency services would be similar to those described for the Two Interchange Alternative.

**Variations on the Build Alternatives**

While all of these potential variations would entail some modifications to the extent of project-related disturbance and related impacts to utilities and services, the nature of such impacts (i.e., temporary disruption in function or service) generally would remain unchanged. However, the 46-foot Median Variation would result in a wider R/W in the developed area east of Sanyo Avenue, with a greater potential to impact utilities within existing local roadways and on private property.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to utilities or emergency public services would result. In addition, the public safety benefit of reducing emergency response times by extending SR-11 would not occur.

### 3.7.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

Project design and construction would be required to minimize utility disruption in conformance with Public Utilities Code, Section 12808. In addition to standard notification and coordination requirements, the following specific measures would be required to maintain utilities and emergency response services:

- Caltrans and GSA would coordinate with the responsible utilities companies regarding any necessary relocation of the existing fuel line that crosses the northeast corner of the POE/CVEF and the 30-inch diameter gas pipeline in the southern portion of the POE site

- Interior and exterior storage areas for recyclables and green waste and adequate recycling containers would be provided within public areas

- Most construction and demolition waste (including but not limited to soil, vegetation, concrete, lumber, metal and cardboard) would be reused or recycled

- Disruption to emergency response service on local roads would be minimized through implementation of a construction traffic control plan to provide for passage of emergency vehicles. Details would be developed during final design

- Disruption of the U.S. Border Patrol activities would be minimized by cooperation with the agency to facilitate its activities while still realizing the project purpose and need

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

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# 3.8 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

A *Tier II Traffic Technical Report* (VRPA Technologies 2010a) with a *Memorandum for SR-11/Siempre Viva Road Design Variation* (VRPA Technologies 2010b), was completed for Tier II of the SR-11/Otay Mesa East POE, and is summarized in this section of the EIR/EIS. The purpose of the Tier II project-level traffic analysis is to provide a description of existing and future traffic conditions with and without the various alternatives and variations based on average daily traffic, AM peak hour, and PM peak hour traffic conditions. Pedestrian forecasts and effects on facilities for pedestrians, bicycles, and transit are also discussed.

## 3.8.1 Regulatory Setting

FHWA directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. DOT issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the U.S. DOT regulations (49 CFR part 27) implementing Section 504 of the Rehabilitation Act (29 USC 794). FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

## 3.8.2 Affected Environment

Methodology

Existing conditions were analyzed for the year 2009. The traffic study area generally includes the proposed SR-11 corridor, as well as state highways and local roadways and intersections that are likely to experience a substantial increase or decrease in traffic, depending on whether SR-11 is built. The traffic study area includes all of SR-905; portions of I-5, I-805, and SR-125; and key local roadways east of Britannia Boulevard and south of the Otay River Valley (refer to Figure 1-1).

Roadway and intersection operational performance is typically described in terms of level of service (LOS). There are six levels of service, ranging from LOS A (where traffic flows freely with low volumes and high speeds) to LOS F (where traffic volumes exceed capacity and result in forced flow operations at low speeds). Each LOS represents a range of operating conditions and the driver's perception of those conditions; safety is not included in the measures that establish service levels. Table 3.8-1 presents general LOS definitions. Depending on local conditions, LOS C, D, and E are all used as the design target for various traffic engineering applications.

**Table 3.8-1**
**LEVEL OF SERVICE DEFINITIONS**

| LOS | Traffic Flow Description |
|---|---|
| A | Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. No delays. |
| B | Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. No delays. |
| C | Stable traffic flow, but less freedom to select speed, change lanes or pass. Minimal delays. |
| D | Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. Minimal delays. |
| E | Unstable traffic flow. Speeds change quickly and maneuverability is low. Significant delays. |
| F | Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. Considerable delays. |

Source: www.dot.ca.gov/ser (Levels of Service for Two-Lane Highways)

**Existing Traffic Volumes and Operations**

The capacity of each existing freeway and roadway segment and intersection in the traffic study area, expressed in terms of LOS, was determined based on ADT and roadway classification. Where available, ADT conditions were determined through 24-hour counts conducted by VRPA Technologies in early 2009. In cases where roadway segment counts were unavailable, roadway segment ADT was estimated based on peak hour intersection turning movement counts that were recorded by VRPA Technologies in early 2009. Existing ADT values along state highways were taken from 2007 Caltrans state highway information prepared by the Caltrans Traffic and Vehicle Data Systems Unit and published on the Caltrans website. The most recent ADT values were from 2007; these were considered to provide a reasonable approximation of 2009 conditions without the recent variability due to gasoline price fluctuations and the state of the economy. Existing ADT values and LOS for roadway segments are shown on Figure 3.8-1 *2009 Existing ADT and LOS*. Roadway classifications were based on current characteristics, including number of lanes. The total two-way ADT for 2009 distributed between the two existing POEs was as follows:

- San Ysidro: 114,200 passenger cars
- Otay Mesa: 33,500 passenger cars plus 5,300 trucks (38,800 total)

The existing capacities in the project area for freeway and roadway segments, as well as intersections, are provided in tabular form in Appendix H, *Traffic Data*. The freeway segment capacity analysis indicates that all of the freeway segments in the traffic study area are operating at LOS D or better. The roadway segment capacity analysis indicates that all roadway segments within the traffic study area currently operate at LOS D or better, with the exception of one segment operating at marginal LOS E, Otay Mesa Road between SR-125 and Sanyo Avenue. The intersection capacity analysis indicates that all intersections currently operate at LOS D or better during AM/PM peak hours, with the exception of the following intersections:

- Otay Mesa Road and Sanyo Avenue (LOS E during PM peak hour)
- Otay Mesa Road and Alta Road (LOS E during AM peak hour)
- Airway Road and La Media Road (LOS E during PM peak hour)
- Siempre Viva Road and Paseo De Las Americas (LOS E during AM peak hour, LOS F during PM peak hour)

In addition to LOS, freeway and roadway operational performance is also indicated by the volume to capacity ratio (V/C), which is a measure of traffic demand expressed as volume compared to traffic-carrying capacity. A lower V/C indicates adequate performance; an increased V/C indicates reduced performance and increased congestion. For intersections, operational performance is also indicated by delay, which is defined as the additional travel time experienced by a driver at an intersection as compared to a free flowing condition, expressed in seconds and averaged for all vehicles that enter the intersection in the peak hour. Delays greater than 80 seconds at an intersection correspond to LOS F in this analysis, as presented on the tables in Appendix H.

It should be noted that the traffic study area is undergoing a substantial amount of roadway construction activity, and conditions are expected to change as the construction progresses.

**Pedestrian and Bicycle Facilities**

The area near the existing Otay Mesa POE has standard City street sections with sidewalks. Because of the primarily industrial nature of the area, walking is generally associated with trips between employment destinations and transit stops/parking areas or eating establishments. Sidewalks are present sporadically along Otay Mesa Road and Airway Road; some segments have no sidewalks, some have sidewalks present on one side, and some have sidewalks on both sides. Sidewalks are present along at least one side of the following roadway segments: Siempre Viva Road (from La Media Road to Enrico Fermi Drive), Britannia Boulevard (from Otay Mesa Road to Siempre Viva Road), La Media Road (north of Otay Mesa Road to Airway Road), Piper Ranch Road (north of Otay Mesa Road), Sanyo Avenue (from Otay Mesa Road to Airway Road), and Enrico Fermi Drive (south of Airway Road).

Several designated bicycle facilities are located in the project area. The San Diego Region Bike Map (SANDAG 2004) indicates that a bicycle route extends along Otay Mesa Road from Britannia Boulevard east to SR-905. A bicycle route is a shared right-of-way, designated by signs only, with bicycle traffic sharing the roadway with motor vehicles. Bike lanes, striped lanes for one-way bike travel identified by special signs, lane striping, and other pavement markings, are found along Otay Mesa Road, from SR-905 to Alta Road; along Interim SR-905 from Otay Mesa Road to the border; and along Siempre Viva Road, from La Media Road east to Enrico Fermi Drive. There are no existing bicycle facilities located within the proposed SR-11 corridors or POE sites.

The August 2007 amendment to the EOMSP contained an update of the Circulation Element's Bicycle Plan. Changes within the program area included deletion of the segment of the existing bike lane on Otay Mesa Road eastward from Piper Ranch Road to Enrico Fermi Drive due to safety concerns and other constraints; deletion of the planned bike lane on Michael Faraday Drive from Airway Road northward, because that segment of road was deleted from the circulation plan; addition of bike lanes on Enrico Fermi Drive and on Alta Road, both from Siempre Viva Road northward beyond the limits of the program area, to provide connectivity; and realignment of roadway network and bicycle lanes on Airway Road and Siempre Viva Road.

**Transit**

An MTS bus route currently provides daily service to the Otay Mesa area near the existing Otay Mesa POE. Bus Routes 905 and 905A travel between the Iris Avenue Trolley Station in San Ysidro and the

Otay Mesa POE. Bus Route 905A provides service between the terminal destinations at Route 905, with additional local service within Otay Mesa. Both bus routes operate approximately every 30 minutes from early morning to about 7:45 PM on weekdays and about once an hour on the weekends. The buses are equipped with bicycle racks.

The RTP identifies a BRT. The South Bay BRT will provide high-speed transit connections between downtown San Diego and the existing Otay Mesa POE along future I-805 managed lanes, as well as a dedicated transit way through eastern Chula Vista and along SR-125, terminating at the existing Otay Mesa POE.

### 3.8.3 Environmental Consequences

#### Methodology

Traffic conditions in two future years were analyzed: opening year (2015) and horizon year (2035). Traffic forecasts were based on the SANDAG Series 11 regional transportation model, with land use forecasts updated to include pending and approved land development projects in the County and City of San Diego areas of Otay Mesa that were not included in Series 11.

Both the No Build and build alternatives assume a number of roadway improvements would be in place by the analysis time periods of 2015 and 2035. The adopted future roadway network was the 2030 Revenue Constrained Plan Scenario from the 2007 SANDAG RTP. Under 2015 conditions, the roadway network in the project study area for each of the proposed alternatives is assumed to include the following key features:

- Construction of SR-905 as a six-lane freeway from I-805 to the international border[1]
- Construction of SR-125 as a four-lane freeway from Otay Mesa Road to the SR-905/SR-125 interchange
- Construction of a roadway connection from the SR-905/SR-125 interchange to Enrico Fermi Drive
- Addition of two HOV lanes on I-805 between East Palomar Street and SR-94
- Construction of a large number of local roadways in the Otay Mesa area

The 2035 roadway network for each alternative would include the following additional improvements:

- Addition of an interchange at SR-125/Lone Star Road that is not included in the 2015 scenario
- Widening of SR-125 to eight lanes between Telegraph Canyon Road and SR-54
- Widening of I-805 between East Palomar Street and SR-94 to a managed lane facility with 12 total lanes

Future County and City roadways were assumed to be built if they were included in the SANDAG RTP, Revenue Constrained scenario. The roadway width and lane configuration were based on Community Plan Circulation Elements. The roadway improvements assumed in the No Build and build alternatives are the same, except for the SR-11 project itself.

[1] A seventh lane has been added to the SR-11 project design between SR-125 and Britannia Boulevard, based on the modeling results. The need for this additional lane was not envisioned at the time of modeling. The model assumption of six lanes for the entire length of SR-905 continues to be acceptable as a "worst case" scenario.

Since the regional transportation model horizon year is 2030 and the horizon year for this study is 2035, a growth factor of one percent per year was used to convert from 2030 traffic forecasts to 2035 traffic forecasts. This growth factor was based on engineering judgment and is a typical growth factor used in the San Diego region to convert from 2030 to 2035 traffic forecasts. In addition, adjustments to the SANDAG regional transportation model were made to predict the distribution of traffic among the various San Diego - Mexico border crossings and to account for the effect of no tolls on SR-11 for the No Toll Variation. Details on these adjustments for the various traffic forecasts are in the *Tier II Traffic Technical Report* (VRPA Technologies 2009).

The future total ADT distributed among the three POEs and applied in the analysis are presented in Table 3.8-2. Existing ADT volumes also are presented for comparison. Since SR-11 and the Otay Mesa East POE are assumed to be in place in the SANDAG regional transportation model, border crossing traffic forecasts at the three POEs in the Otay Mesa area (San Ysidro, Otay Mesa, and proposed Otay Mesa East) are available for this scenario. For the No Build Alternative, it was necessary to determine the average daily traffic crossing the border at only the San Ysidro and Otay Mesa border crossings (no POE at Otay Mesa East). For the future No Build condition, the total level of traffic was assumed to be the same as for the build condition but redistributed between the two existing POEs. The assumption of the same demand for the build versus No Build alternatives, which is consistent with other regional transportation analyses, allows direct comparisons regarding how well alternative scenarios of transportation improvements would serve a given level of traffic demand. These comparisons are useful in certain transportation planning and policy considerations. In addition, the assumption of the same border crossing travel demand creates a worst-case assumption regarding transportation improvements needed near the existing POEs for the No Build Alternative, and helps in analyzing the need for the project.

Traffic conditions in 2015 and 2035 were evaluated for the No Build Alternative and the following project build alternatives and variations (a total of 14 scenarios):

- Two Interchange Alternative (with toll): Full interchange at Enrico Fermi Drive, half interchange at Siempre Viva Road (access to and from the west only).

- Siempre Viva Road Full Interchange Variation: This design variation, which would apply only to the Two Interchange Alternative, assumes the construction of a full interchange at SR-11/Siempre Viva Road rather than the half interchange described under the baseline Two Interchange Alternative. This variation would add separate loop-style ramps for commercial-only and passenger-only traffic between Siempre Viva Road and the POE, as well as a direct roadway link for commercial-only traffic to access Siempre Viva Road from the CVEF.

- One Interchange Alternative (with toll): Interchange at Alta Road.

- No Interchange Alternative (with toll): No local access interchanges between the SR-905/ SR-125/SR-11 interchange and the international border.

- No Toll Variation: This variation applied to each of the above build alternatives would not change the roadway layout or lane geometry, but assumes that SR-11 is built as a freeway.

- SR-125 Connector Variation: This design variation applied to each of the above build alternatives assumes the construction of a connector ramp from southbound SR-125 to eastbound SR-11, in addition to the basic SR-905/SR-125/SR-11 interchange layout.

- SR-905/SR-125/SR-11 Full Interchange Variation: This design variation could apply to any of the build alternatives assumes the construction of a full interchange at SR-905/SR-125/ SR-11 that would provide direct connectors for all traffic movements. This would add three connector ramps to the basic SR-905/SR-125/SR-11 interchange layout: southbound SR-125 to eastbound SR-11, northbound SR-905 to eastbound SR-11, and westbound SR-11 to southbound SR-905.

**Table 3.8-2**
**SUMMARY OF TWO-WAY AVERAGE DAILY TRAFFIC FORECASTS AT INTERNATIONAL BORDER CROSSINGS**

| Analysis Year | SR-11 Scenario | San Ysidro POE | | | Otay Mesa POE | | | Otay Mesa East POE | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Autos | Trucks | Total | Autos | Trucks | Total | Autos | Trucks | Total |
| 2009 | Existing | 114,200 | 0 | 114,200 | 33,500 | 5,300 | 38,800 | 0 | 0 | 0 |
| 2015 | No Build | 130,700 | 0 | 130,700 | 41,700 | 7,700 | 49,400 | 0 | 0 | 0 |
| 2015 | Build / Toll | 112,100 | 0 | 112,100 | 37,200 | 5,000 | 42,200 | 23,100 | 2,700 | 25,800 |
| 2015 | Build / No Toll | 109,300 | 0 | 109,300 | 36,400 | 4,600 | 41,000 | 26,700 | 3,100 | 29,800 |
| 2035 | No Build | 186,200 | 0 | 186,200 | 73,400 | 12,000 | 85,400 | 0 | 0 | 0 |
| 2035 | Build / Toll | 151,600 | 0 | 151,600 | 67,300 | 7,200 | 74,400 | 40,800 | 4,800 | 45,600 |
| 2035 | Build / No Toll | 145,800 | 0 | 145,800 | 66,600 | 6,400 | 73,000 | 47,200 | 5,600 | 52,800 |

Source: VRPA Technologies 2009

Similar to the existing conditions analysis, the capacity of each freeway and roadway segment and roadway intersection in the traffic study area is expressed in terms of LOS, and was determined based on ADT and roadway classification. Roadway segment classifications for 2015 and 2035 are shown in the Traffic Technical Report.

For the purposes of this analysis, resulting roadway and intersection LOS were evaluated as follows:

1. LOS A, B, and C were considered an indication that there would be no traffic operational problems and that most or all drivers would be satisfied with the resulting traffic conditions. LOS C or better conditions constitute the ideal level of service for new roadway facilities (including the SR-11 facility).

2. LOS D was considered to provide a reasonable level of traffic operations for peak hour conditions that would be considered satisfactory for most drivers. A roadway design concept that could achieve LOS D would be recommended where substantial cost increases or other considerations would make it difficult to achieve LOS C.

3. LOS E and F were considered to indicate potential traffic congestion and were therefore considered to be undesirable. LOS E was considered an indication that the roadway or intersection under study would operate at or near capacity with levels of delay that would be

> considered unsatisfactory to most drivers. LOS F was considered an indication that the roadway or intersection would be over capacity. Under LOS F conditions, drivers would be expected to experience substantial delays and some drivers would be expected to choose other routes or other time periods to make their trips. Although LOS E and F conditions are considered to be undesirable, they are often an indication of a potential problem and a need for further consideration. This is particularly true for LOS E or F conditions that are predicted for the future, where plans for roadway facilities and/or land development could be modified to resolve a predicted LOS E or F condition.

In the case of City and County roadway facilities, levels of service are provided for both roadway segments and intersections. In some cases discrepancies could exist between the level of service reported for intersections along a roadway segment and the level of service for the roadway segment itself. In these cases, the intersection levels of service were considered to be more detailed, superseding the roadway segment levels of service. The roadway segment levels of service were provided in these cases for informational purposes, since they are a common planning tool used by local agencies.

The area through which SR-11 is located is expected to experience a substantial amount of land development in the future. San Diego County has prepared the EOMSP for development of the County portion of Otay Mesa and the City of San Diego is in the process of updating its community plan for the City portion of Otay Mesa. Some land use forecasts prepared by others have envisioned a more rapid development of land than is forecast in the 2030 SANDAG model that forms the basis of the Tier II traffic study. However, the land use forecasts used in the Tier II traffic study are considered to represent the current regional consensus.

For comparison purposes, Figure 3.8-2, *Traffic Forecasts from EOMSP* shows 2030 traffic forecasts from the EOMSP analysis assuming full build out of the specific plan area. Some of the traffic forecasts from the EOMSP analysis are higher than the corresponding 2035 traffic forecasts provided in the SR-11/Otay Mesa East POE traffic analysis. This is an indication that there is a continuing need to monitor traffic forecasts and roadway improvements in the project study area.

The impact conclusions for the build alternatives are based on a comparison with the No Build Alternative conditions. As such, each traffic condition is first analyzed for the No Build Alternative, followed by analysis of the build alternatives and variations. Results for the following analyses are summarized below: SR-11, freeway segments, roadway segments, and intersections.

**SR-11 Performance**

The total projected traffic carried on SR-11 and the utilization of the ramps were evaluated for each of the alternatives and variations in 2015 and 2035. The results are summarized in Table 3.8-3.

No Build Alternative

SR-11 would not be constructed under the No Build Alternative. As such, the capacity of the freeway is not analyzed for this alternative.

**Table 3.8-3**
**ADT ON SR-11 MAIN LINE AND INTERCHANGES IN 2015 AND 2035**

| Alternative | Year | ADT Main Line | ADT/ Degree Utilized* at Enrico Fermi Interchange | ADT/ Degree Utilized* at Siempre Viva Interchange | ADT/ Degree Utilized* at Alta Interchange |
|---|---|---|---|---|---|
| Two Interchange With Toll | 2015 | 27,300 | 12,100 / well | 1,500 / under | N/A |
| | 2035 | 62,600 | 44,800 / heavily | 13,400 / well | N/A |
| Two Interchange With Toll Plus Siempre Viva Road Full Interchange Variation | 2015 | 23,400 | 9,800 / well | 6,400 / well | N/A |
| | 2035 | 42,800 | 34,000 / well | 29,200 / well | N/A |
| One Interchange With Toll | 2015 | 25,800 | N/A | N/A | 16,000 / well |
| | 2035 | 48,600 | N/A | N/A | 47,000 / heavily |
| No Interchange With Toll | 2015 | 25,800 | N/A | N/A | N/A |
| | 2035 | 45,600 | N/A | N/A | N/A |
| Two Interchange (No Toll) | 2015 | 31,600 | 13,200 / well | 1,800 / under | N/A |
| | 2035 | 74,800 | 42,800 / heavily | 22,000 / heavily | N/A |
| One Interchange (No Toll) | 2015 | 29,800 | N/A | N/A | 20,000 / well |
| | 2035 | 61,400 | N/A | N/A | 57,000 / heavily |
| No Interchange (No Toll) | 2015 | 29,800 | N/A | N/A | N/A |
| | 2035 | 52,800 | N/A | N/A | N/A |
| Two Interchange With Toll Plus SR-125 Connector | 2015 | 27,800 | 13,600 / well | 2,000 / under | N/A |
| | 2035 | 66,600 | 47,800 / heavily | 14,400 / well | N/A |
| One Interchange With Toll Plus SR-125 Connector | 2015 | 25,800 | N/A | N/A | 18,000 / well |
| | 2035 | 52,600 | N/A | N/A | 51,000 / heavily |
| No Interchange With Toll Plus SR-125 Connector | 2015 | 25,800 | N/A | N/A | N/A |
| | 2035 | 45,600 | N/A | N/A | N/A |
| Two Interchange With Toll Plus SR-905/SR-125/SR-11 Full Interchange Variation | 2015 | 32,800 | 12,800 / well | 3,600 / well | N/A |
| | 2035 | 79,800 | 47,400 / heavily | 25,200 / heavily | N/A |
| One Interchange With Toll Plus SR-905/SR-125/SR-11 Full Interchange Variation | 2015 | 27,400 | N/A | N/A | 10,600 / well |
| | 2035 | 65,400 | N/A | N/A | 60,600 / heavily |
| No Interchange With Toll Plus SR-905/SR-125/SR-11 Full Interchange Variation | 2015 | 25,800 | N/A | N/A | N/A |
| | 2035 | 45,600 | N/A | N/A | N/A |

Source: VRPA Technologies 2010a, 2010b
* Notes:
Under = SR-11 access under-utilized; ADT of 1,000 or less per ramp
Well = SR-11 access well utilized; ADT greater than 1,000 and less than 10,000 per ramp
Heavily = SR-11 access heavily utilized; ADT greater than 10,000 per ramp

Build Alternatives and Variations in 2015 and 2035

*Two Interchange Alternative and Variations*

For the Two Interchange Alternative and variations in 2015, the Enrico Fermi Drive Interchange would be well utilized; however, for the alternatives where the SR-11 ramps at the Siempre Viva half-interchange are forecast to carry only 1,500 to 2,000 vehicles per day, this half-interchange would be under-utilized at opening day unless local development proceeds at higher than anticipated rates. In 2035, the Enrico Fermi Drive Interchange would be heavily utilized, and the Siempre Viva Drive half-interchange would be well utilized. ADT forecasts on SR-11 are expected to range from approximately 62,600 to 79,800

vehicles per day in 2035, depending on design concept, tolling strategy, and location along SR-11. In most cases, a four-lane facility would be adequate to handle this level of traffic; however, there are a few variations where a six-lane facility and/or auxiliary lanes would be desirable, based on conservative estimates of traffic operations. For the Two Interchange Alternative and no toll and SR-125 connector variations, the SR-125 off-ramp would operate at LOS E during the PM peak hour. For the Two Interchange Alternative with the SR-905/SR-125/SR-11 Full-Interchange Variation, the SR-125 off-ramp as well as the Enrico Fermi Drive on-ramp would operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

*One Interchange Alternative and Variations*

For the One Interchange Alternative and variations, the Alta Road interchange would be well utilized in 2015 and 2035. For all variations, the total ADT expected on SR-11 in 2015 could easily be accommodated by a four-lane freeway/tollway. ADT forecasts on SR-11 are expected to range from approximately 48,600 to 65,400 vehicles per day in 2035, depending on design concept, tolling strategy, and location along SR-11. In most cases, a four-lane facility would be adequate to handle this level of traffic; however, a six-lane facility and/or auxiliary lanes would be desirable for the One Interchange Alternative with the no toll and SR-905/SR-125/SR-11 Full Interchange variations, for which a conservative estimate of traffic operations indicates the SR-125 off-ramp would operate at LOS E during the PM peak hour.

*No Interchange Alternative and Variations*

The No Interchange Alternative would not include any of the interchanges evaluated in Table 3.8-3. This alternative is forecast to carry similar ADT volumes to those for the One Interchange Alternative in 2015. By 2035, it would carry the least ADT among the various alternatives for each variation. Analysis of the SR-905/SR-125/SR-11 Interchange under this alternative indicates that the PM peak hour for the SR-125 connector ramp from westbound SR-11 would be LOS E, based on a conservative estimate of expected traffic operations.

**Freeway Segment Capacity**

The ADT, V/C ratio, and LOS for freeway segments for the No Build Alternative and three build (toll) alternatives in 2015 and 2035 are summarized in tabular form in Appendix H. In the analysis that follows, the No Build scenario is presented first, as the baseline for comparison with each of the build alternatives/variations.

<u>No Build Alternative</u>

In 2015, all freeway segments would operate at LOS D or better for the No Build Alternative, with the exception of I-805 north of SR-905, which would operate at LOS F.

In 2035, the following seven freeway segments would operate at LOS E or F for the No Build Alternative:

- SR-905 from I-5 to I-805 (LOS F)
- SR-905 from I-805 to Otay Mesa Road (LOS F)
- SR-905 from Otay Mesa Road to Britannia Boulevard (LOS F)
- SR-905 from Britannia Boulevard to La Media Road (LOS F)
- I-5 North of SR-905 (LOS F)
- I-805 North of SR-905 (LOS F)
- I-805 from SR-905 to I-5 (LOS E)

The SR-905 segments were modeled with six lanes, and the I-5 and I-805 segments were modeled with eight lanes.

Build Alternatives and Variations in 2015

In 2015, all freeway segments would operate at LOS D or better for the build alternatives, except for I-805 north of SR-905, which would operate at LOS F for all cases. For this freeway segment, the V/C ratio is slightly lower for the build alternatives, indicating the project would have a slightly improved performance compared to the No Build condition. This result is the same for all the build alternatives with any of the variations.

Build Alternatives and Variations in 2035

Table 3.8-4 compares the 2035 freeway segments of the No Build Alternative to the build alternatives. The seven freeway segments that would operate at LOS F for the No Build Alternative also would operate at LOS F for the build alternatives. The V/C ratios for the build alternatives generally would be the same or slightly increased compared to the No Build Alternative, indicating the freeway segments would have a slightly reduced performance with the build alternatives. In 2035, the V/C ratio would be slightly lower for I-805 with the build alternatives, and the I-805 segment from SR-905 to I-5 would be LOS D compared to LOS E for the No Build Alternative, indicating this freeway segment would have improved performance with the build alternatives. One freeway segment, SR-125 north of Lone Star Road, would operate at LOS E in 2035 compared to LOS D for the No Build Alternative, indicating the freeway segment would have reduced performance with the build alternatives. This segment was modeled with four lanes. In summary, for 2035, freeway performance would be slightly reduced with the build alternatives for segments of SR-125 and SR-905, would be similar for segments of I-5, and would be improved for segments of I-805. This result is the same for all the build alternatives with all of the variations.

**Table 3.8-4**
**COMPARISON OF 2035 NO BUILD TO BUILD ALTERNATIVE FREEWAY SEGMENTS[1, 2, 3]**

| Freeway Segment | No Build | Two Interchange Alternative | One Interchange Alternative | No Interchange Alternative |
|---|---|---|---|---|
| SR-125,<br>North of Lone Star Road | LOS D | **LOS E** | **LOS E** | **LOS E** |
| SR-905,<br>I-5 to I-805 | LOS F | LOS F<br>**Increased V/C** | LOS F<br>**Increased V/C** | LOS F<br>**Increased V/C** |
| SR-905,<br>I-805 to Otay Mesa Road | LOS F | LOS F<br>**Increased V/C** | LOS F<br>Lower V/C | LOS F<br>Same V/C |
| SR-905,<br>Otay Mesa Road to Britannia Boulevard | LOS F | LOS F<br>Lower V/C | LOS F<br>Lower V/C | LOS F<br>**Increased V/C** |
| SR-905,<br>Britannia Boulevard to La Media Road | LOS F | LOS F<br>**Increased V/C** | LOS F<br>**Increased V/C** | LOS F<br>**Increased V/C** |

**Table 3.8-4 (cont.)**
**COMPARISON OF 2035 NO BUILD TO BUILD ALTERNATIVE FREEWAY SEGMENTS[1, 2, 3]**

| Freeway Segment | No Build | Two Interchange Alternative | One Interchange Alternative | No Interchange Alternative |
|---|---|---|---|---|
| I-5, North of SR-905 | LOS F | LOS F **Increased V/C** | LOS F **Increased V/C** | LOS F Same V/C |
| I-805, North of SR-905 | LOS F | LOS F Lower V/C | LOS F Lower V/C | LOS F Lower V/C |
| I-805, SR-905 to I-5 | LOS E | LOS D | LOS D | LOS D |

Source: VRPA Technologies 2010a, 2010b
Note:
[1] Only roadway segments that would operate at level of service (LOS) E or F in one or more alternatives are presented.
[2] Increased V/C indicates reduced performance; lower V/C indicates improved performance
[3] Results shown in **BOLD** print indicate a build alternative would have reduced performance compared to the No Build Alternative.

### Roadway Segment Capacity

The ADT, V/C ratio, and LOS for roadway segments for the No Build Alternative and three build alternatives in 2015 and 2035 are summarized in the tables in Appendix H. Existing values also are presented for comparison purposes. Figures 3.8-3 through 3.8-10 show ADT and LOS on the local roadways for the No Build and three build alternatives in 2015 and 2035.

No Build Alternative

In 2015, all roadway segments would operate at LOS C or better for the No Build Alternative (Figure 3.8-3, *2015 ADT and LOS – No Build Alternative*). Otay Mesa Road between SR-125 and Sanyo Avenue (approximated by the segment from SR-125 to Sunroad Boulevard), is operating at LOS E under existing conditions; it would operate at LOS A in 2015 for the No Build Alternative. In 2035, the following five roadway segments would operate at LOS E or F for the No Build Alternative (Figure 3.8-4, *2035 ADT and LOS – No Build Alternative*):

- Lone Star Road from SR-125 to Sunroad Boulevard (LOS F)
- Siempre Viva Road from SR-905 to Paseo De Las Americas (LOS F)
- Sunroad Boulevard from Zinser Road to Otay Mesa Road (LOS E)
- Enrico Fermi Drive from Otay Mesa Road to SR-11 (LOS E)
- Alta Road North of Lone Star Road (LOS E)

Build Alternatives and Variations in 2015

In 2015, all roadway segments would operate at LOS C or better for all build alternatives and variations. Similar to the No Build Alternative, Otay Mesa Road between SR-125 and Sanyo Avenue, which is operating at LOS E under existing conditions, would operate at LOS A in 2015 for all build alternatives and variations (Figures 3.8-5, *2015 ADT and LOS – Two Interchange Alternative,* 3.8-6, *2015 ADT and LOS – One Interchange Alternative,* and 3.8-7, *2015 ADT and LOS – No Interchange Alternative*).

Build Alternatives and Variations in 2035

Otay Mesa Road between SR-125 and Sanyo Avenue (approximated by the segment from SR-125 to Sunroad Boulevard), which is operating at LOS E under existing conditions, would be improved to LOS A or B in 2035 for all of the build alternatives and variations.

Table 3.8-5 compares the 2035 roadway segments of the No Build Alternative to the build alternatives for the five roadway segments that would operate at LOS E or F for the No Build Alternative in 2035, as well as two roadway segments that would operate at LOS D or better for the No Build Alternative but would have LOS E or F for one or more of the build alternatives.

**Table 3.8-5**
**COMPARISON OF 2035 NO BUILD TO BUILD ALTERNATIVE ROADWAY SEGMENTS[1, 2, 3]**

| Road Segment | No Build | Two Interchange Alternative | One Interchange Alternative | No Interchange Alternative |
|---|---|---|---|---|
| Lone Star Road from SR-125 to Sunroad Boulevard | LOS F | LOS E | LOS E | LOS F<br>**Increased V/C** |
| Lone Star Road from Sunroad Boulevard to Enrico Fermi Drive | LOS D | LOS C | LOS D | **LOS F** |
| Siempre Viva Road from SR-905 to Paseo De Las Americas | LOS F | LOS D | LOS F<br>Lower V/C | LOS F<br>**Increased V/C** |
| Sunroad Boulevard from Zinser Road to Otay Mesa Road | LOS E | LOS E<br>Lower V/C | LOS D | LOS D |
| Enrico Fermi Drive from Otay Mesa Road to SR-11[4] | LOS E | **LOS F** | LOS A | LOS A |
| Alta Road north of Lone Star Road | LOS E | LOS E<br>Same V/C | LOS E<br>Same V/C | LOS E<br>Same V/C |
| Alta Road from Otay Mesa Road to Airway Road | LOS A | LOS A | **LOS E** | LOS A |

Source: VRPA Technologies 2010a, 2010b
Notes:
[1] Only roadway segments that would operate at LOS E or F in one or more alternatives are presented.
[2] Increased V/C indicates reduced performance; lower V/C indicates improved performance.
[3] Results shown in **BOLD** print indicate a build alternative would have reduced performance compared to the No Build Alternative.
[4] In the case of the No Build Alternative, this refers to the approximate location of what is currently planned as SR-11.

*Two Interchange Alternative and Variations*

The Two Interchange Alternative would have improved performance compared to the No Build Alternative for three of the seven roadway segments, the same LOS as the No Build Alternative for three roadway segments, and reduced performance compared to the No Build Alternative for one roadway segment (Enrico Fermi Drive from Otay Mesa Road to SR-11), as depicted in Figure 3.8-8, *2035 ADT and LOS – Two Interchange Alternative*. The variations would generally have the same roadway segment performance as their corresponding build alternative, with the following exceptions:

- Siempre Viva Road Full Interchange Variation: Sunroad Boulevard would be improved to LOS D (versus LOS E for the Two Interchange Alternative)
- Siempre Viva Road Full Interchange Variation: Enrico Fermi Drive would be improved to LOS D (versus LOS F for the Two Interchange Alternative)
- No Toll Variation: Siempre Viva Road would be improved to LOS C (versus LOS D for the Two Interchange Alternative)
- No Toll Variation: Sunroad Boulevard would be improved to LOS D (versus LOS E for the Two Interchange Alternative)
- SR-125 Connector Variation: Lone Star Road from Sunroad Boulevard to Enrico Fermi Drive would be the same as the No Build Alternative at LOS D (versus LOS C for the Two Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Lone Star Road from Sunroad Boulevard to Enrico Fermi Drive would be the same as the No Build Alternative at LOS D (versus LOS C for the Two Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Siempre Viva Road would be improved to LOS C (versus LOS D for the Two Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Sunroad Boulevard would be improved to LOS D (versus LOS E for the Two Interchange Alternative)

*One Interchange Alternative and Variations*

The One Interchange Alternative would have improved performance compared to the No Build Alternative for three of the seven roadway segments, the same LOS as the No Build Alternative for three roadway segments, and reduced performance compared to the No Build Alternative for one roadway segment (Alta Road from Otay Mesa Road to Airway Road), as depicted in Figure 3.8-9, *2035 ADT and LOS – One Interchange Alternative*. The variations would generally have the same roadway segment performance as their corresponding build alternative, with the following exceptions:

- No Toll Variation: Siempre Viva Road would be improved to LOS D (versus LOS F for the One Interchange Alternative)
- SR-125 Connector Variation: Siempre Viva Road would be improved to LOS E (versus LOS F for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Lone Star Road from SR-125 to Sunroad Boulevard would be improved to LOS D (versus LOS E for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Lone Star Road from Sunroad Boulevard to Enrico Fermi Drive would be improved to LOS B (versus LOS D for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Siempre Viva Road would be improved to LOS D (versus LOS F for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Sunroad Boulevard would have reduced performance at LOS E (versus LOS D for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Alta Road from Otay Mesa Road to Airway Road would have reduced performance at LOS F (versus LOS E for the One Interchange Alternative)

*No Interchange Alternative and Variations*

The No Interchange Alternative would have improved performance compared to the No Build Alternative for two of the seven roadway segments, the same LOS for four roadway segments, and reduced performance compared to the No Build Alternative for one roadway segment (Lone Star Road from

Sunroad Boulevard to Enrico Fermi Drive), as depicted in Figure 3.8-10, *2035 ADT and LOS – No Interchange Alternative*.

Roadway segment operational performance would be the same or improved for the no toll and SR-125 connector variations, compared with the corresponding No Interchange Alternative (with toll). The SR-905/SR-125/SR-11 Full Interchange Variation would have the same or improved performance for most roadway segments, but would have reduced performance at LOS E (versus LOS D for the No Interchange Alternative) along the Sunroad Boulevard roadway segment.

**Intersection Capacity**

The AM and PM peak average delay and LOS for intersections for the No Build Alternative and three build alternatives (with toll) in 2015 and 2035 are summarized in the tables in Appendix H. Existing values also are presented for comparison purposes.

No Build Alternative

In 2015, all intersections would operate at LOS C or better for the No Build Alternative. In 2035, only the intersection of Otay Mesa Road and La Media Road would operate at LOS E or F.

Build Alternatives and Variations in 2015

In 2015, all intersections would operate at LOS C or better for all build alternatives and variations, with one exception: for the SR-125 Connector Variation of the No Interchange Alternative, the intersection of Siempre Viva Road and Paseo De Las Americas would operate at LOS D during the PM peak hour versus LOS C for the No Interchange Alternative without this variation. The following intersections that are operating at LOS E or F in existing conditions would be expected to improve to LOS D or better in 2015:

- Otay Mesa Road and Sanyo Avenue
- Otay Mesa Road and Alta Road
- Airway Road and La Media Road
- Siempre Viva Road and Paseo De Las Americas

In general terms, anticipated roadway improvements in the traffic study area are expected to meet or exceed the demand created by the forecast traffic increases, resulting in improved levels of service between 2009 and 2015.

Build Alternatives and Variations in 2035

Table 3.8-6 compares the 2035 intersections of the No Build Alternative to the build alternatives for the intersection of Otay Mesa Road and La Media Road (projected to operate at LOS F under the No Build Alternative), as well as five intersections that would operate at LOS D or better for the No Build Alternative but would be LOS E or F for one or more of the build alternatives.

*Two Interchange Alternative and Variations*

As shown in Table 3.8-6, the Two Interchange Alternative would have improved performance compared to the No Build Alternative at two of the six intersections, the same LOS at three intersections, and reduced performance compared to the No Build Alternative at one intersection (Otay Mesa Road and Enrico Fermi Drive in the PM peak hour).

In 2035, the variations would generally result in intersection operational performance at LOS D or better, or the same LOS for the AM/PM peak hours as those of the Two Interchange Alternative, with the following exceptions:

- Siempre Viva Road Full Interchange Variation: Otay Mesa Road/La Media Road would have improved performance at LOS E/E (versus LOS E/F for the Two Interchange Alternative)
- Siempre Viva Road Full Interchange Variation: Otay Mesa Road/Enrico Fermi Drive would have improved performance at LOS B/C (versus LOS C/F for the Two Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Otay Mesa Road/La Media Road would have reduced performance at LOS F/F (versus LOS E/F for the Two Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: SR-905 WB Off-ramp/La Media Road would have reduced performance at LOS C/E (versus LOS B/B for the Two Interchange Alternative)

*One Interchange Alternative and Variations*

The One Interchange Alternative would have improved performance compared to the No Build Alternative at three of the six intersections and the same LOS at three intersections; performance would not be reduced to LOS to E or F at any of the six intersections.

In 2035, the variations would generally result in intersection operational performance at LOS D or better, or the same LOS as those of the One Interchange Alternative, with the following exceptions:

- No Toll Variation: Otay Mesa/Alta Road would have reduced performance at LOS E/E (versus LOS E/F for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Otay Mesa Road/La Media Road would be improved to LOS E/E (versus LOS E/F for the One Interchange Alternative)
- SR-905/SR-125/SR-11 Full Interchange Variation: Otay Mesa Road/Alta Road would have reduced performance at LOS E/D (versus D/D for the One Interchange Alternative)

*No Interchange Alternative and Variations*

The No Interchange Alternative would not have improved performance compared to the No Build Alternative at any of the six intersections. It would have the same LOS at two intersections, and would have reduced performance compared to the No Build Alternative at four intersections.

In 2035, the variations would generally result in intersection operational performance at LOS D or better, or the same as those of the No Interchange Alternative, with the following exception:

- SR-125 Connector Variation: Siempre Viva Road/SR-905 NB Ramps would have reduced performance at LOS F in the PM peak hour (versus LOS E in the PM peak hour for the No Interchange Alternative)

**Table 3.8-6**
**COMPARISON OF 2035 NO BUILD TO BUILD ALTERNATIVE INTERSECTIONS[1, 2]**

| Intersection | No Build Alternative AM/PM Peak LOS | Two Interchange Alternative AM/PM Peak LOS | One Interchange Alternative AM/PM Peak LOS | No Interchange Alternative AM/PM Peak LOS |
|---|---|---|---|---|
| Otay Mesa Road and La Media Road | LOS F/F | LOS E/F | LOS E/F | LOS F/F |
| Otay Mesa Road and Enrico Fermi Drive | LOS C/D | **LOS C/F** | LOS C/C | LOS C/D |
| SR-905 WB Off-ramp and La Media Road | LOS B/B | LOS B/B | LOS B/B | **LOS C/E** |
| Siempre Viva Road and SR-905 NB Ramps | LOS D/D | LOS C/C | LOS C/D | **LOS E/E** |
| Siempre Viva Road and Paseo De Las Americas | LOS D/D | LOS D/D | LOS D/D | **LOS E/F** |
| Siempre Viva Road and Enrico Fermi Drive | LOS C/C | LOS C/C | LOS C/C | **LOS D/E** |

Source: VRPA Technologies 2010a, 2010b
Note:
[1] Only intersections that would operate at LOS E or F in one or more alternatives are presented.
[2] Results shown in **BOLD** print indicate a build alternative would have reduced performance compared to the No Build Alternative.

### Summary of Adverse Operational Performance Traffic Effects

Freeway Segments

Implementation of any of the build alternatives would have an adverse effect in 2035 on the segment of SR-125 north of Lone Star Road, with projected performance being reduced from LOS D for the No Build Alternative to LOS E for all build alternatives. An adverse effect is defined as reducing performance to LOS E or F compared with the No Build Alternative scenario, or increasing the V/C ratio where the No Build Alternative operational performance would be LOS E or F:

Implementation of the following toll alternatives would have an adverse effect in 2035 on the freeway segments listed that would operate at LOS F with the No Build Alternative and a build alternative, but would have an increased V/C ratio (indicating reduced performance) with a build alternative:

- Two Interchange Alternative: SR-905 from I-5 to Otay Mesa Road and Britannia Boulevard to La Media Road; I-5 from north of SR-905
- One Interchange Alternative: SR-905 from I-5 to I-805 and Britannia Boulevard to La Media Road; I-5 from north of SR-905
- No Interchange Alternative: SR-905 from I-5 to I-805 and Otay Mesa Road to La Media Road

None of the variations would improve these results.

Roadway Segments

Implementation of the following toll alternatives would have an adverse effect in 2035 on the roadway segments listed. An adverse effect is defined as reducing performance to LOS E or F compared with the No Build Alternative scenario, or increasing the V/C ratio where the No Build Alternative operational performance would be LOS E or F:

- Two Interchange Alternative: Enrico Fermi Drive from Otay Mesa Road to SR-11
- One Interchange Alternative: Alta Road from Otay Mesa Road to Airway Road
- No Interchange Alternative: Lone Star Road from SR-125 to Enrico Fermi Drive, and Siempre Viva Road from SR-905 to Paseo De Las Americas

Only the Siempre Viva Road Full Interchange Variation would improve the result for the Two Interchange Alternative. None of the variations would improve any of the other results.

Intersections

Implementation of the following toll alternatives would have an adverse effect in 2035 on the intersections listed. An adverse effect is defined as reducing performance to LOS E or F, compared with the No Build Alternative:

- Two Interchange Alternative: Otay Mesa Road and Enrico Fermi Drive
- One Interchange Alternative: no adverse effects
- No Interchange Alternative: SR-905 WB off-ramp and La Media Road, Siempre Viva Road and SR-905 NB ramps, Siempre Viva Road and Paseo De Las Americas, Siempre Viva Road and Enrico Fermi Drive

Only the Siempre Viva Road Full Interchange Variation would improve the result for the Two Interchange Alternative. None of the other variations would improve any of the results for the Two Interchange Alternative.

The traffic queuing analysis performed as part of the project traffic study (VRPA Technologies 2010c) indicates, however, that the Siempre Viva Road Full Interchange Variation would have the potential for queue storage and weaving problems at the following locations:

- At the northbound commercial SR-11 off-ramp to Siempre Viva Road, there would be minimal distance between the commercial POE processing area and the beginning of the off-ramp. Any disruptions in off-ramp traffic would tend to cause queues of trucks that would back up into the POE facility.

- The left-turn lane serving both passenger cars and commercial vehicles from westbound Siempre Viva to eastbound SR-11 would consist of a single left-turn lane, but would be expected to carry 389 vehicles per hour in the AM peak hour and 528 vehicles per hour in the PM peak hour. Any left-turn movement carrying more than 300 vehicles per hour would normally require two lanes. It is considered infeasible, however, to provide a dual left-turn lane at this location, because the southbound on-ramp diverges a short distance from the intersection to separate passenger car and commercial vehicle ramps. If a dual left-turn lane were provided, it would be difficult or impossible to position vehicles in the correct lanes as they diverge, leading to safety concerns.

- The commercial vehicle ramp from Siempre Viva Road to eastbound SR-11 joins the eastbound SR-11 commercial vehicle lanes just north of the toll plaza for southbound commercial vehicles. This would create a short weaving section in which commercial vehicles entering the mainline on the on-ramp on the right side may wish to use toll lanes on the left side of the toll plaza, leading to safety concerns. This same problem would apply to the passenger vehicle ramp from Siempre Viva Road to eastbound SR-11.

**Benefits to Local Motorists, Residences and Businesses**

The proposed SR-11 and POE are planned facilities in the EOMSP, OMCP, RTP, RTIP and other local plans, and would be implemented by any of the project build alternatives. The EOMSP and currently proposed cumulative development projects in the East Otay Mesa area have assumed implementation of the Two Interchange Alternative in planning documents and proposed designs. While any of the build alternatives would increase accessibility to East Otay Mesa and to Mexico, the Two Interchange Alternative with the Siempre Viva Road Full Interchange Variation would provide the greatest accessibility between SR-11 and local businesses in the East Otay Mesa area. There are very few existing or planned residents in this area who would benefit from this greater accessibility. The One Interchange Alternative would provide the next best accessibility for businesses, followed by the No Interchange Alternative, and finally the No Build Alternative, with the least benefit to accessibility. Accessibility between SR-11, SR-905 and SR-125 would be enhanced with the SR-125 Connector and SR-905/SR-125/SR-11 Full Interchange Variations. Under the No Toll Variation, this increased accessibility would be further enhanced by the absence of toll charges, increasing the feasibility of travel on SR-11 and through the Otay Mesa East POE for a greater number of travelers.

The proposed build alternatives, with toll, would offer commercial and passenger vehicles the opportunity to cross the border with a shorter wait time (planned to not exceed 30 minutes). Under the No Toll Variation, longer wait times would be expected. Nevertheless, the wait times at the San Ysidro, Otay Mesa and East Otay Mesa POEs would all be shorter under any of the build alternatives than they would be at the San Ysidro and Otay Mesa POEs under the No Build Alternative, based on the increased border crossing capacity for the region that would be associated with any of the build alternatives.

**Pedestrian and Bicycle Impacts**

The SR-11 portion of the project is expected to provide or maintain typical pedestrian facilities at interchanges and local roadway crossings, including ADA-compliant sidewalks and pedestrian signals at the ramp terminal intersections. The typical pedestrian facilities are expected to accommodate pedestrian demand.

Estimates of future pedestrian crossings assumed that the average day of the peak month would be an appropriate design level for pedestrian activity. This value is considered to represent a compromise between the peak time period that would be overly conservative and the average day that would be considered to be too low for design purposes.

Using the guideline described above and assuming that northbound and southbound crossings are equal in a given day, the following 2005 base-year two-way daily pedestrian crossings were calculated:

- San Ysidro: 58,393 total crossings per day (based on an average day in the peak month of August 2005)
- Otay Mesa: 11,128 total crossings per day (based on an average day in the peak month of April 2005)

Forecasts of future pedestrian border crossings require some indicator of the level of activity that would occur in 2035 compared to the base year of 2005. The most reliable indicator of activity at the border crossings is considered to be the SANDAG regional transportation model. The model forecasts vehicle traffic at San Ysidro, Otay Mesa, and Otay Mesa East. If it is assumed that vehicle activity and pedestrian activity are related, the model's traffic forecasts can be used in determining future pedestrian forecasts. In this case, the 2030 traffic forecasts from the model have been increased by one percent per year to estimate 2035 conditions, the same growth factor that was used for traffic.

Table 3.8-7 shows the pedestrian forecasts for all three POEs. A total of 14,100 daily two-way pedestrian crossings are forecast at Otay Mesa East using the following methodology:

- For the base year of 2005, the ratio of pedestrian crossings per vehicle crossing was calculated. San Ysidro has a ratio of 0.55 pedestrian crossing per vehicle crossing, while Otay Mesa has a ratio of 0.31 pedestrian crossing per vehicle crossing. This reflects development patterns and transportation facilities at San Ysidro that are more conducive to pedestrian activity.
- For the future year of 2035, San Ysidro and Otay Mesa were assumed to have the same ratio of pedestrian crossings to vehicle crossings. Based on the transportation model's forecast of vehicle crossings, pedestrian crossings can be directly calculated.
- For Otay Mesa East, it was assumed that the ratio of pedestrian crossings to vehicle crossings would be 0.31, the same as the current ratio at the Otay Mesa POE. It is not known exactly how the area surrounding the proposed Otay Mesa East POE would be developed. However, it is likely that development patterns would be similar to the Otay Mesa POE area and less pedestrian-oriented than the San Ysidro POE, which has the San Diego trolley station on the U.S. side of the border and downtown Tijuana and tourist destinations nearby in Mexico.

It should be noted that the pedestrian forecast of 14,100 pedestrians per day means that in 2035, the proposed Otay Mesa East POE would be accommodating 27 percent more pedestrians than are being accommodated by the existing Otay Mesa POE today.

**Table 3.8-7**
**DAILY TWO-WAY BORDER CROSSING VEHICLE AND PEDESTRIAN FORECASTS**

| Port of Entry | 2005 | | | 2035 | | |
|---|---|---|---|---|---|---|
| | Pedestrians | Vehicles | Pedestrian Crossings / Vehicle Crossing | Pedestrians | Vehicles | Pedestrian Crossings / Vehicle Crossing |
| San Ysidro | 58,400 [1] | 106,000 [2] | 0.55 | 83,400 [3] | 151,600 [4] | 0.55 |
| Otay Mesa | 11,100 [1] | 36,000 [2] | 0.31 | 23,100 [3] | 74,400 [4] | 0.31 |
| Otay Mesa East | N/A | N/A | N/A | 14,100 | 45,600 [4] | 0.31 |

[1] U.S. Bureau of Transportation Statistics Data (www.transtats.bts.gov/bordercrossing.apsx). Based on average day in the peak month.

[2] Caltrans Website (www.caltrans.gov/hq/traffops/saferesr/trafdata/2005all.htm).

[3] Calculated based on ratio of pedestrian crossings to vehicle crossings.

[4] See Table 3.8-2.

Pedestrians crossing the international border at the Otay Mesa East POE would travel to and from other destinations in the U.S. via pedestrian, transit, taxi, or vehicular modes. Siempre Viva Road is expected to be the closest location to the new POE on the local street system. The type and location of pedestrian facilities to be provided has not been determined. Possibilities include an off-street drop-off area/pedestrian loading zone, which could be near the SR-11/Siempre Viva Road Interchange or another location with easy access to the POE. It is expected that ADA-compliant pedestrian walkways would be provided between the POE and Siempre Viva Road, including any identified pedestrian drop off/loading location, and that ADA-compliant sidewalks would be provided along Siempre Viva Road to convey pedestrians between the POE and local destinations.

The *Tier II Traffic Technical Report* (VRPA Technologies 2009) assumed that bicycles would be treated as pedestrians for the purpose of the border crossing process and that bicycle facilities would be provided on local roadways per current San Diego County standards. Estimates of bicycle crossings are therefore included within the forecasts for pedestrian crossings in Table 3.8-7.

There are no existing bicycle facilities located within the proposed SR-11 corridors or POE sites that may be impacted by implementation of the proposed project. Bicycle lanes planned for Enrico Fermi Drive and Alta Road from Siempre Viva Road northward beyond the limits of the program area would provide connectivity between the proposed POE and the existing bicycle facilities in the region, as the local roadways in East Otay Mesa are constructed. Cyclists would be permitted to cross the border at the proposed POE.

**Transit**

The SR-11 portion of the project is expected to provide for transit operations along the freeway mainline and interchanges in mixed-flow traffic. No separate transit facilities are expected to be needed because the SR-11 facilities are expected to operate at desirable levels of service with minimal delays.

Future transit service at the Otay Mesa East POE is expected to consist of the following components:

- South Bay BRT Line: This BRT line is currently planned to have its southern terminus at the Otay Mesa border crossing. An extension of this service to the Otay Mesa East POE is under consideration.
- MTS Bus Route Service: In addition to the South Bay BRT line, it is logical to expect that MTS bus service will be extended to the Otay Mesa East POE, similar to the service that is provided at the Otay Mesa POE currently. This could be an extension of service from SR-905 or from a different route to serve the East Otay Mesa area, including the proposed POE.

Transit buses carrying passengers to the Otay Mesa East POE would need a location to stop for loading and unloading of passengers. The minimum requirement for this service would be a bus stop along Siempre Viva Road, which would be the closest public roadway to the POE. A more ideal facility for passenger loading and unloading would be an off-street transit center. The ideal location for a transit center would be the area south of Siempre Viva Road and west of the Otay Mesa East POE. Because Siempre Viva Road is aligned from southwest to northeast in the vicinity of the Otay Mesa East POE, a location in this area would provide for the minimum possible walking distance between the POE and the loading/unloading area for buses.

### Parking

No parking would be permitted along SR-11. The proposed POE and CVEF would provide on-site parking for employees and official visitors to these facilities. No public parking for border crossers is anticipated, for security reasons, although the PDS that is currently underway for the POE could make a different recommendation. Those wishing to cross the border without a vehicle would be encouraged to use transit, taxis, bicycles, walking and other alternate means of transport to approach the POE. It is anticipated that any remaining demand for public parking would be met by private vendors within surrounding private properties.

### Construction Impacts

The proposed project construction for SR-11, associated connections to SR-905, the POE and CVEF is expected to begin in2013 and be completed by 2015. If the SR-125 Connector or SR-905/SR-125/SR-11 Full Interchange Variation is selected, it is expected that these would be constructed at a later time. The cut and fill quantities for the project would not balance under any of the project alternatives. Fill import requirements are estimated at 1,250,000 cy (95,900 truckloads) for the Two Interchange Alternative, 1,360,000 cy (104,700 truckloads) for the One Interchange Alternative, and 1,310,000 (100,800 truckloads) for the No Interchange Alternative. Additional import would be required for the SR-905/ SR-125/SR-11 Interchange variations, although these would be implemented at a later time. During heavy periods of hauling imported fill material to the project site, it is estimated that up to 300 truck trips per day would be generated. Additional traffic generated by project construction would include construction employees traveling to and from the site each day, hauling of demolition debris off site in the early stages of clearing/grading for the project, and delivery of construction materials to the site periodically. Project construction-related trips could result in increased congestion of local streets and freeways in the project area. According to the TMP (AECOM/Caltrans 2009a) for the project, temporary full or partial closures of SR-905, Sanyo Avenue, Enrico Fermi Drive, and Alta Road are anticipated to be necessary. Likely detour routes at various times during construction would include Otay Mesa Road, Airway Road, La Media Road and Sanyo Avenue. These road closures and detours could cause motorist delays on existing roads during construction (AECOM/Caltrans 2009a).

### No Build Alternative

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to traffic would result. The No Build Alternative could contribute to continued long wait times to cross the border, with associated traffic congestion. These impacts would be expected to increase over time without implementation of the proposed project.

## 3.8.4 Avoidance, Minimization and/or Mitigation Measures

### Measures to Address Construction Impacts

As discussed in Chapter 2.0, Project Alternatives, a TMP was prepared for the project to minimize motorist delays on existing roads during construction (AECOM/Caltrans 2009a). The following list includes measures from the TMP and other appropriate measures for consideration to be added to the TMP:

- A Public Awareness Campaign to educate the public about potential construction plans and scheduling
- Motorist Information Strategies, such as signs and radio announcements, to divert traffic volume from the construction site

- Incident Management, including a Construction Zone Enhanced Enforcement Program (COZEEP) that would station CHP Officers and Traffic Management Team units at construction sites to facilitate safer construction and traffic conditions and respond quickly to incidents
- Construction Strategies of selectively utilizing lane closures and the Otay Mesa POE site to conduct construction activities (e.g., vehicle/equipment staging)
- Contingency Plans for instances in which the timely opening of lanes is deemed unachievable
- Alternate Route Strategies that would temporarily divert traffic to allow construction activities while maintaining sufficient traffic flow along SR-905 (if open) and reasonable access to businesses
- During heavy periods of hauling of dirt, construction materials, and debris, utilize designated truck routes with flagmen and/or temporary signalization/signage as appropriate, and coordinate with the responsible local jurisdiction(s) regarding construction-related trucking arrangements
- Consider scheduling heavy trucking periods during non-peak traffic hours, if necessary to avoid further impacting freeway/roadway segments and intersections that tend to operate at undesirable levels of service during peak hours
- All parking associated with project construction would be contained within the project limits of disturbance or another secured location that would not conflict with existing public parking

The project construction contractor would be required to maintain at least one access to all existing businesses during project construction, and keep adjacent businesses informed of periods of interruption of any usual access route/driveway.

**Measures to Address Operations Impacts**

In 2035, certain freeway segments, roadway segments, and intersections were identified as having reduced performance at LOS E or F with the project implemented compared to the No Build Alternative, or having an increased V/C ratio with the project implemented when operational performance for the No Build Alternative, would be at LOS F. No feasible measures, that are within the control or responsibility of Caltrans, have been identified to avoid, minimize or mitigate these project impacts. In order to avoid, minimize or mitigate the adverse traffic effects that are projected to occur within the Otay Mesa area by 2035, it would be necessary to amend current circulation element roadway classifications and RTIP plans for regional transportation facilities. Based on the traffic forecasts for the proposed project, the below-listed amendments to local and regional circulation plans may be needed by 2035 to ensure that roadway/intersection operations in the project area would be no worse than with the No Build Alternative. Conditions in the project area should be monitored following project implementation to ensure that such modifications would be needed.

<u>All Alternatives</u>

The future operational performance of SR-125 north of Lone Star Road could be improved by increasing the number of lanes along this segment of SR-125.

Traffic volumes along SR-125 and SR-905 could be reduced by increasing the tolls for SR-11 and SR-125 during peak hours.

The future operational performance of SR-905 could be improved by increasing the planned number of lanes for the affected segments of SR-905 from 6 lanes to 8 or 10 lanes.

The future operational performance of I-5 north of SR-905 could be improved by increasing the number of lanes along this segment of I-5.

Future traffic volumes in the Otay Mesa region may be reduced through implementation of strong transit, bikeway and pedestrian systems, as well as implementation of TSM/TDM measures throughout the region to encourage the use of alternate modes of transit, promote carpools and vanpools, and reduce vehicle travel during peak hours.

Two Interchange Alternative

Implementation of the Two Interchange Alternative would adversely affect the roadway segment of Enrico Fermi Drive from Otay Mesa Road to SR-11 and the intersection of Otay Mesa Road and Enrico Fermi Drive in 2035. Avoidance of this impact would require that Enrico Fermi Drive be implemented as a six-lane facility instead of a four-lane facility as currently reflected in the local circulation element. This would increase the capacity of the roadway and increase the number of through lanes available on Enrico Fermi Drive at the intersection with Otay Mesa Road, which would improve the function of the intersection. The future modeling of this intersection has already incorporated dual left turn lanes, so increasing the number of through lanes is the most practical enhancement to improve operational performance.

The adverse effects to this roadway segment and intersection would also be avoided by implementation of the Siempre Viva Road Full Interchange Variation, which would result in this roadway segment operating at LOS A and the intersection operating at LOS D or better in 2035.

One Interchange Alternative

Implementation of the One Interchange Alternative would adversely affect the roadway segment of Alta Road from Otay Mesa Road to Airway Road in 2035. Avoidance of this impact would require that Alta Road be implemented as a six-lane facility instead of a four-lane facility as currently reflected in the local circulation element.

No Interchange Alternative

Implementation of the No Interchange Alternative would adversely affect the roadway segments of Lone Star Road from SR-125 to Enrico Fermi Drive, and Siempre Viva Road from SR-905 to Paseo De Las Americas in 2035, as well as the following four intersections:

- SR-905 westbound off-ramp and La Media Road
- Siempre Viva Road and SR-905 northbound ramps
- Siempre Viva Road and Paseo De Las Americas
- Siempre Viva Road and Enrico Fermi Drive

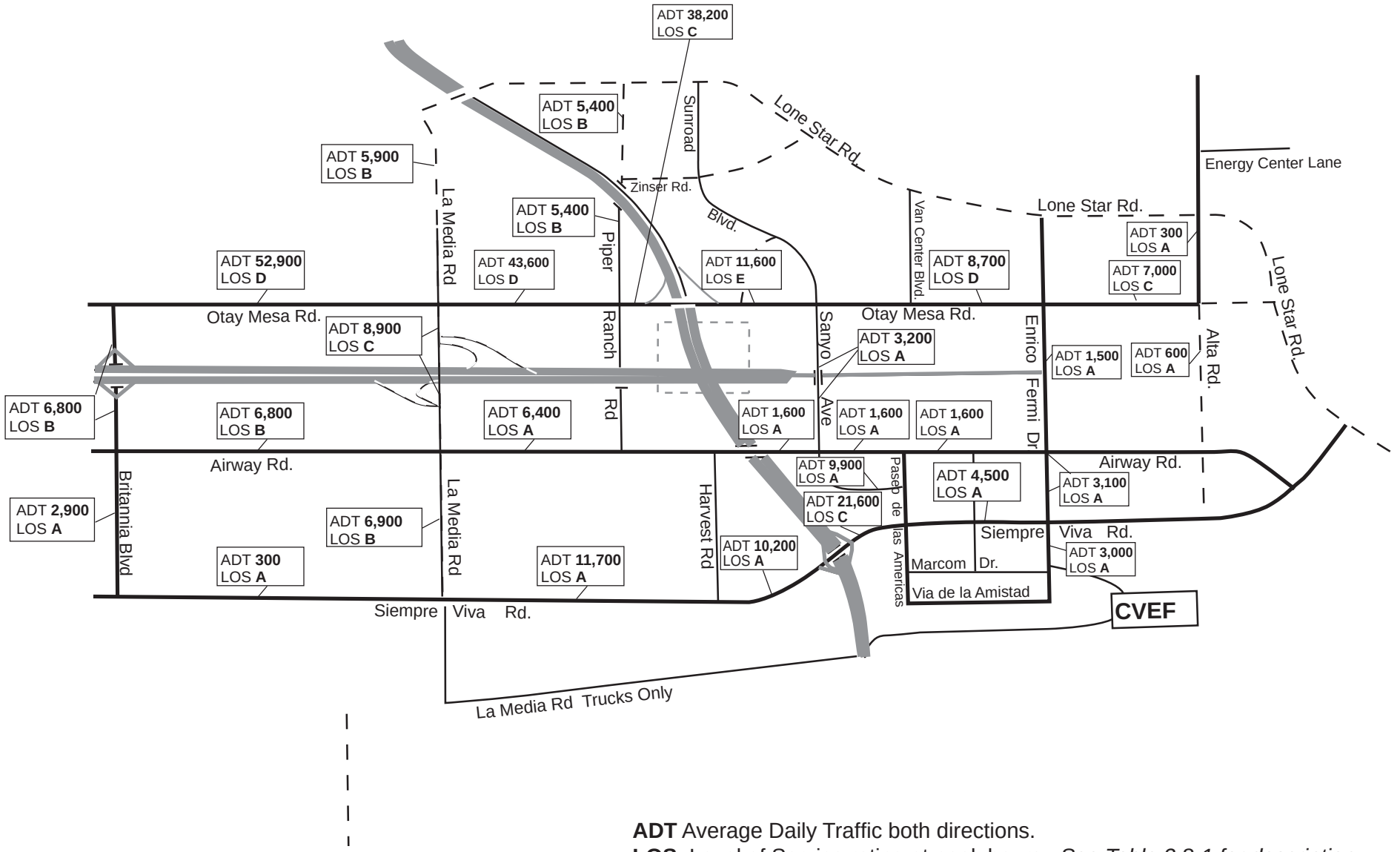
To improve the future operational performance of the Lone Star Road segments would require that this roadway be built out as a six-lane facility instead of a four-lane facility, as currently reflected in the local circulation element. To avoid the impacts to Siempre Viva Road and the three adversely affected intersections with this road, it would be necessary to widen this roadway and the intersections to eight lanes, providing additional through-lane capacity, which would exceed the current circulation element designation for this roadway. To improve the future operational performance of the SR-905 westbound off-ramp and La Media Road intersection it would be necessary to amend the circulation element to designate La Media Road as an eight-lane facility at this location instead of a six-lane facility, to increase the number of through lanes available for the dominant north-south movement.

Conclusion

The proposed project would implement SR-11 and the Otay Mesa East POE, which have been reflected in the EOMSP for many years and should be considered in future transportation planning efforts for the study area in coordination with local entities. The above analysis provides guidance as to the types of modifications that would be necessary to achieve acceptable LOS in the region in 2035, such that operations would be no worse than under the No Build Alternative. The analysis also demonstrates that feasible measures exist to provide this condition, although they are beyond the control or responsibility of Caltrans and are thus not proposed as part of the project.

**No Build Alternative**

Under the No Build Alternative, some intersections and roadway/highway segments would be more congested and some would be less congested, compared with the build alternatives. Because no project action would occur under the No Build Alternative, no associated avoidance, minimization, or mitigation measures would be required.



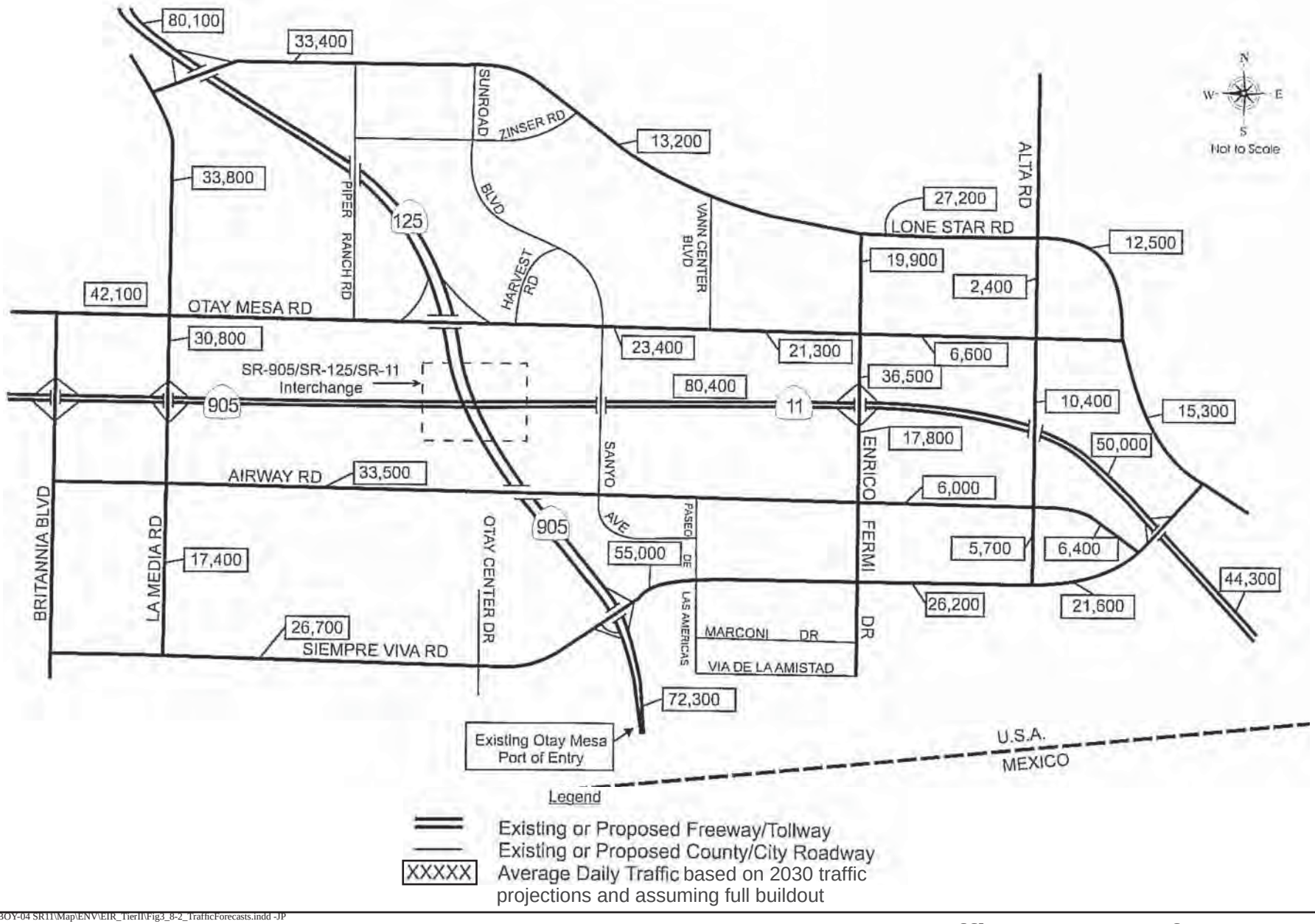

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-1_2009_ADT_LOS.indd -KF

# 2009 Existing ADT and LOS

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-1

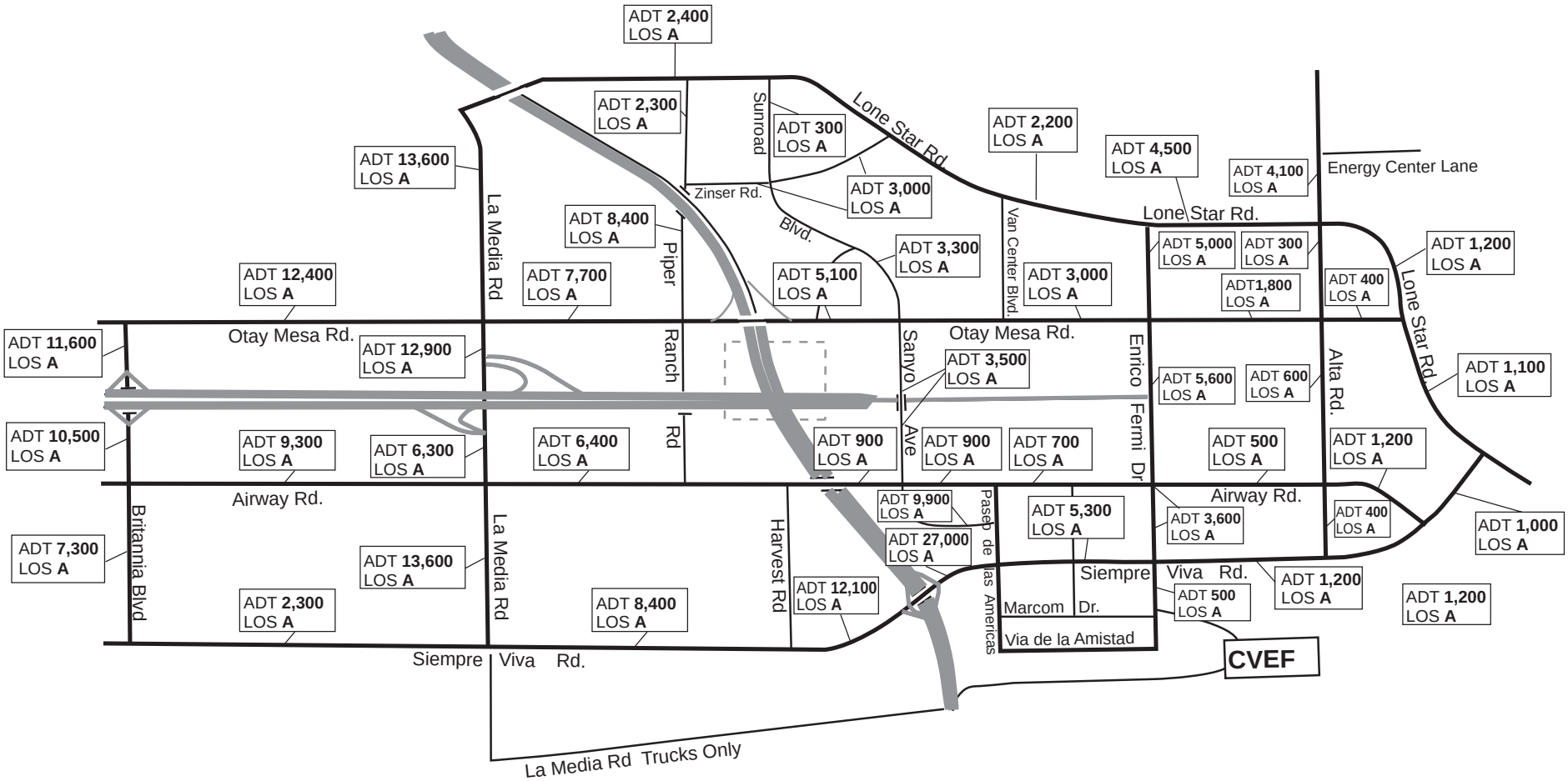



I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-2_TrafficForecasts.indd -JP

## Traffic Forecasts from EOMSP

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-2



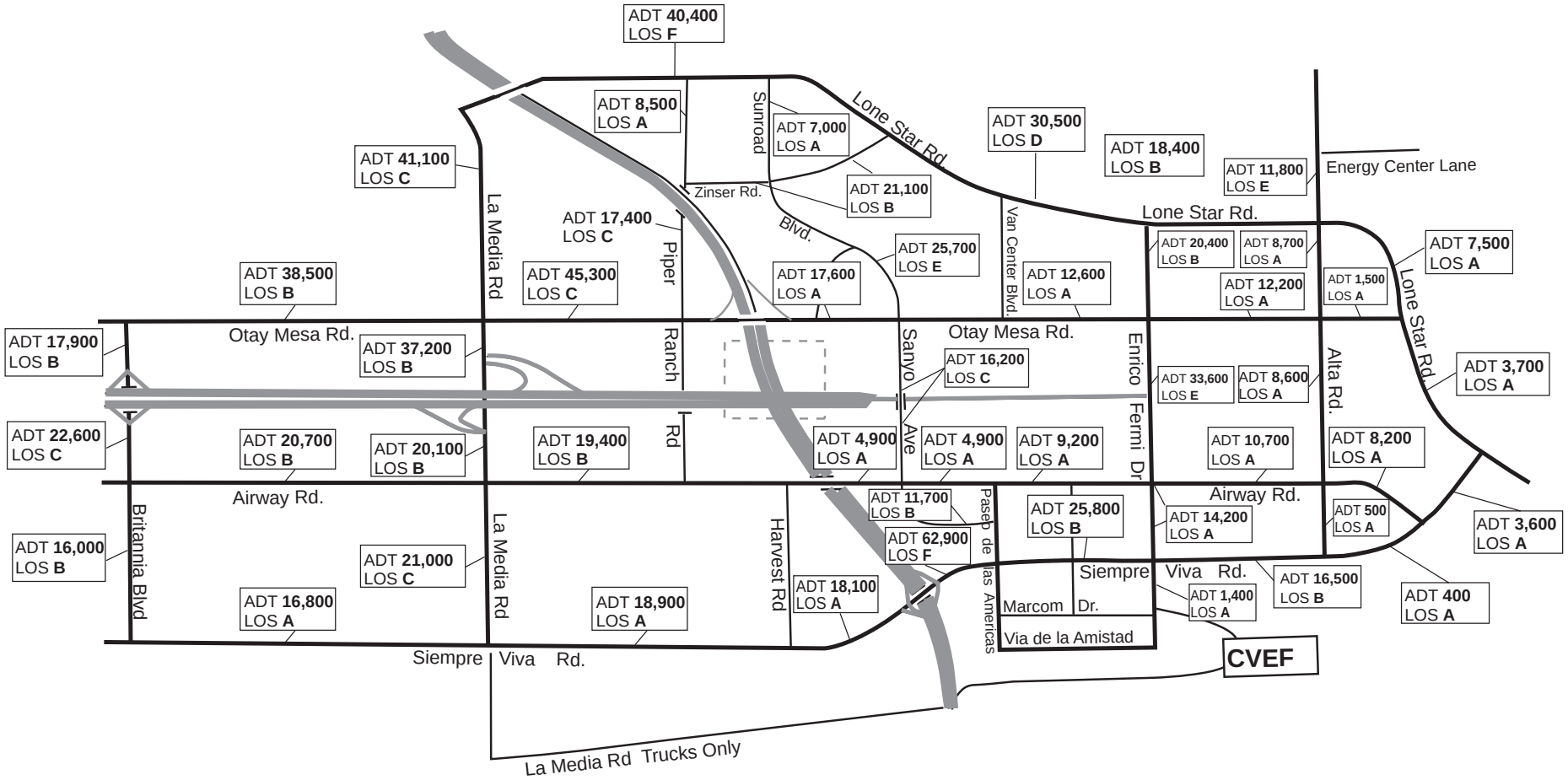

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-3_2015_ADT_LOS_NoBuild.indd -KF

# 2015 ADT and LOS - No Build Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-3



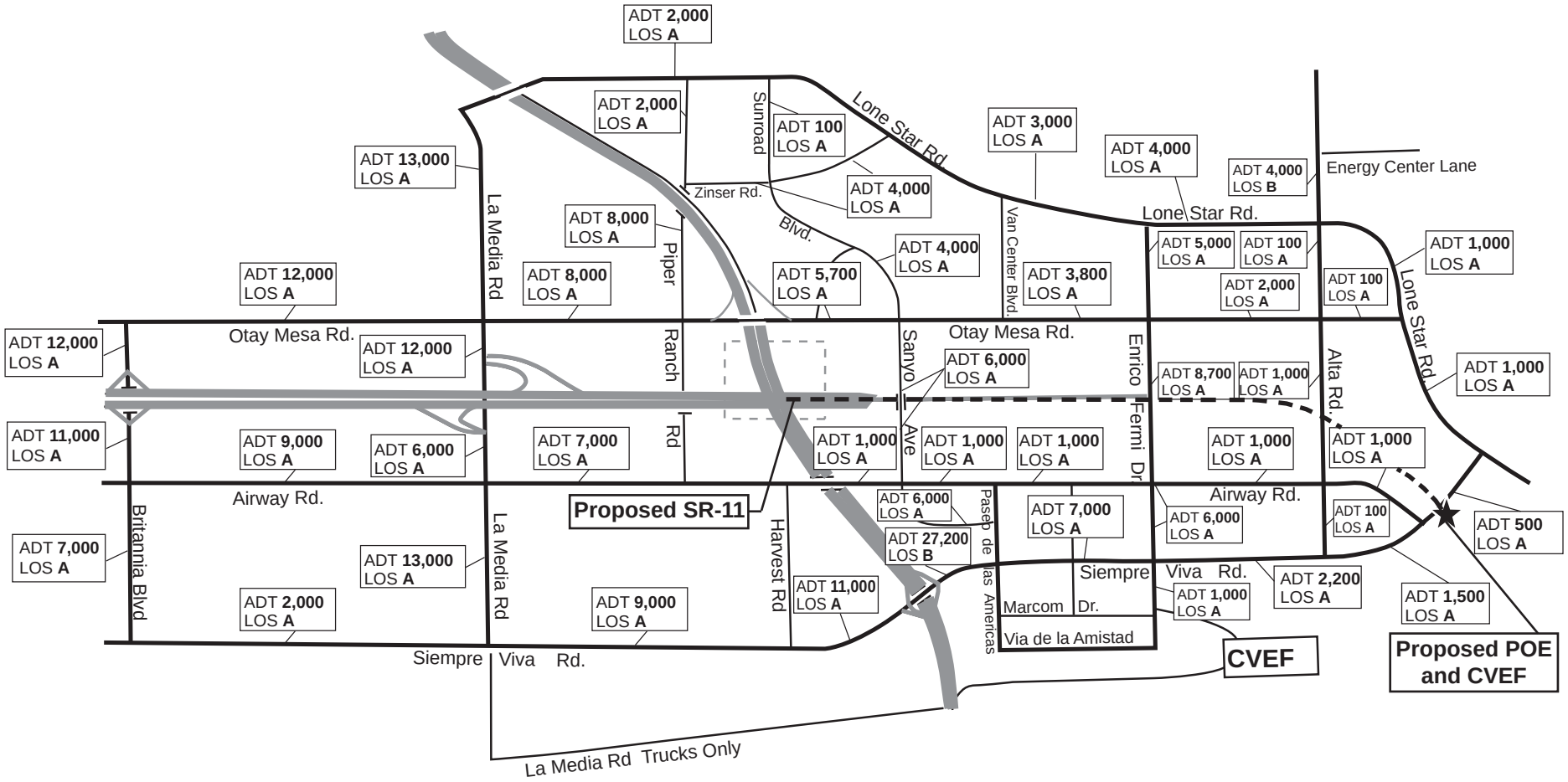

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-4_2035_ADT_LOS_NoBuild.indd -KF

# 2035 ADT and LOS - No Build Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-4



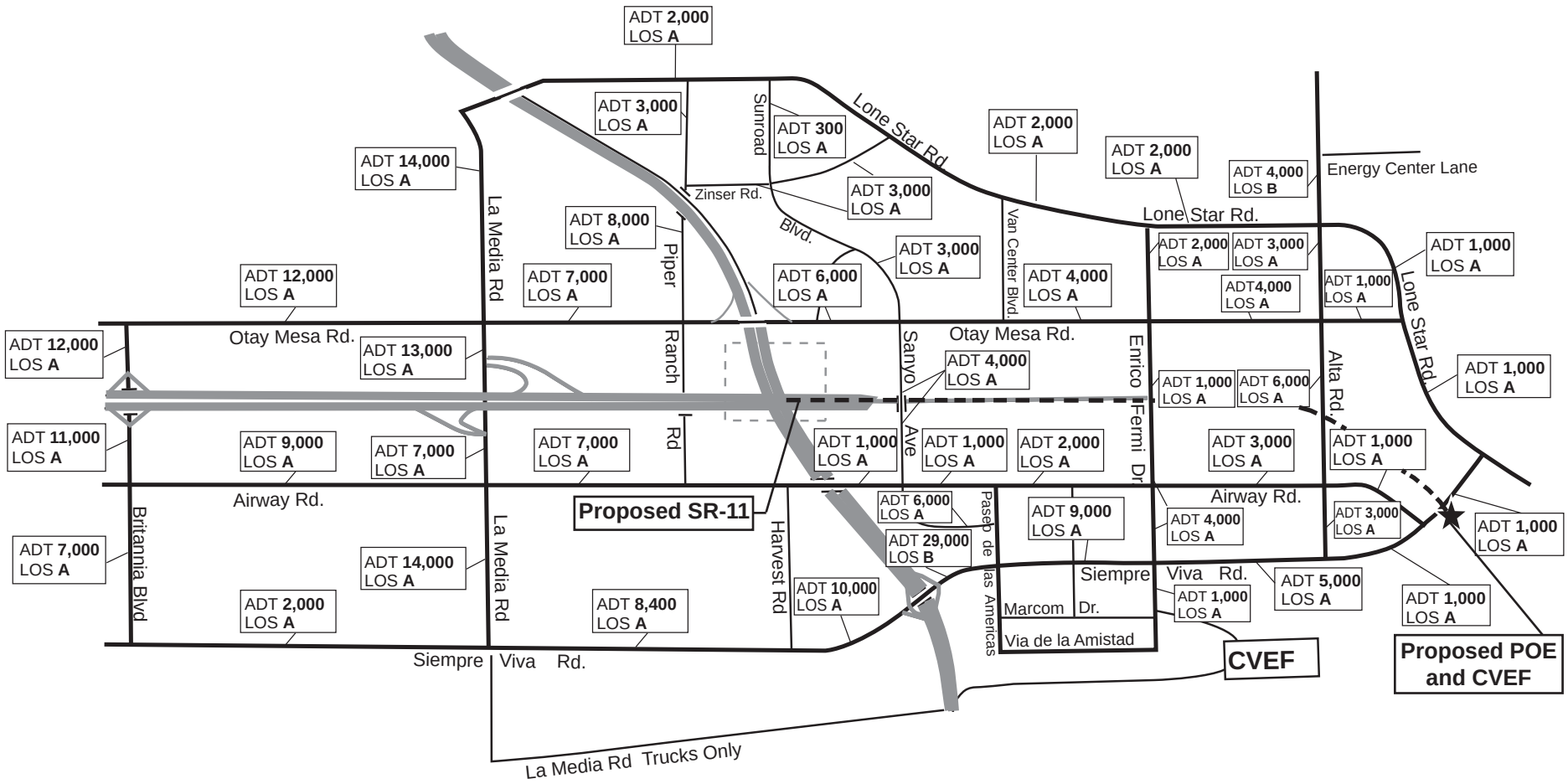

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-5_2015_ADT_LOS_TwoInt.indd -KF

# 2015 ADT and LOS - Two Interchange Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-5



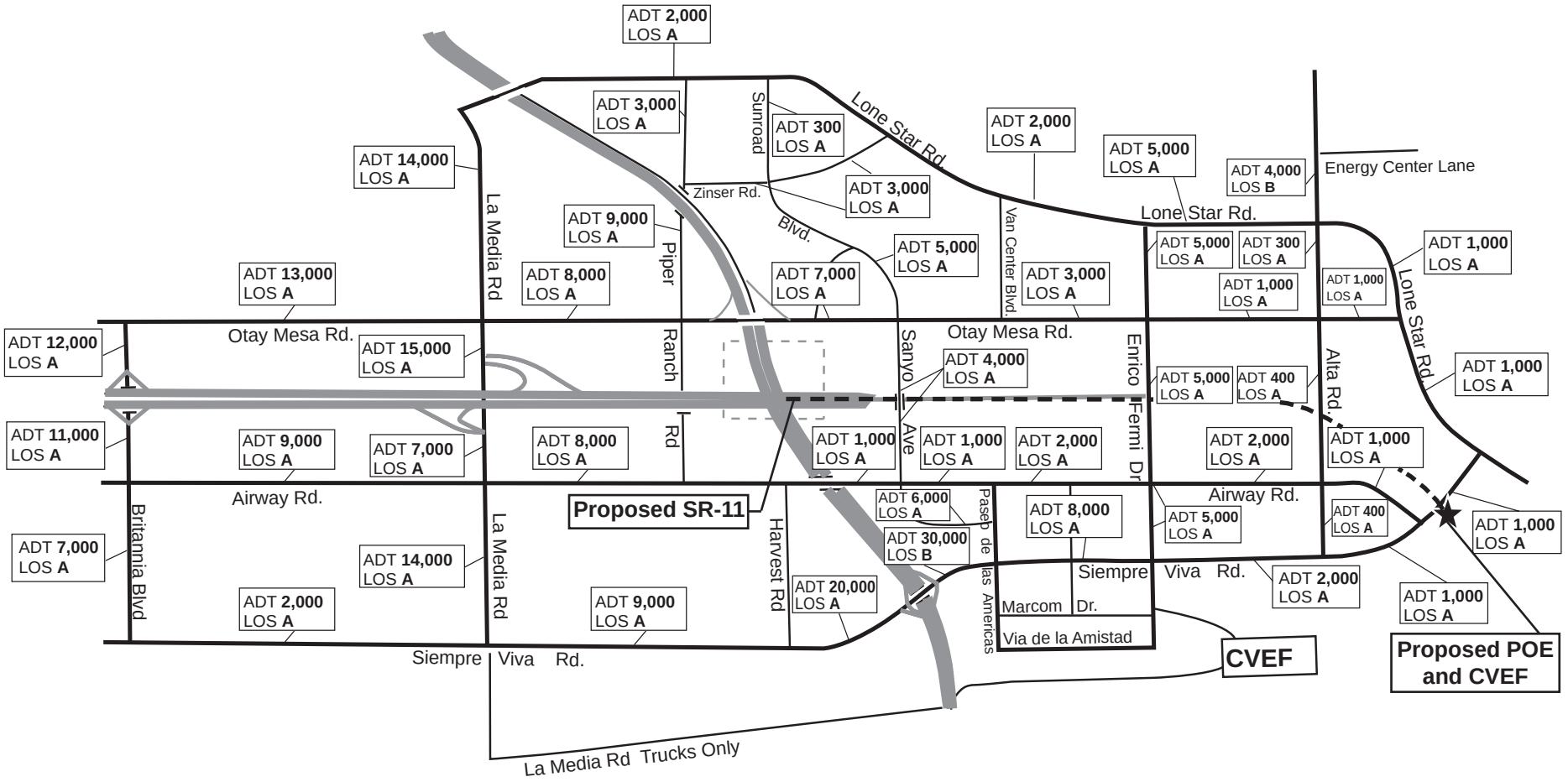

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-6_2015_ADT_LOS_OneInt.indd -KF

# 2015 ADT and LOS - One Interchange Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-6



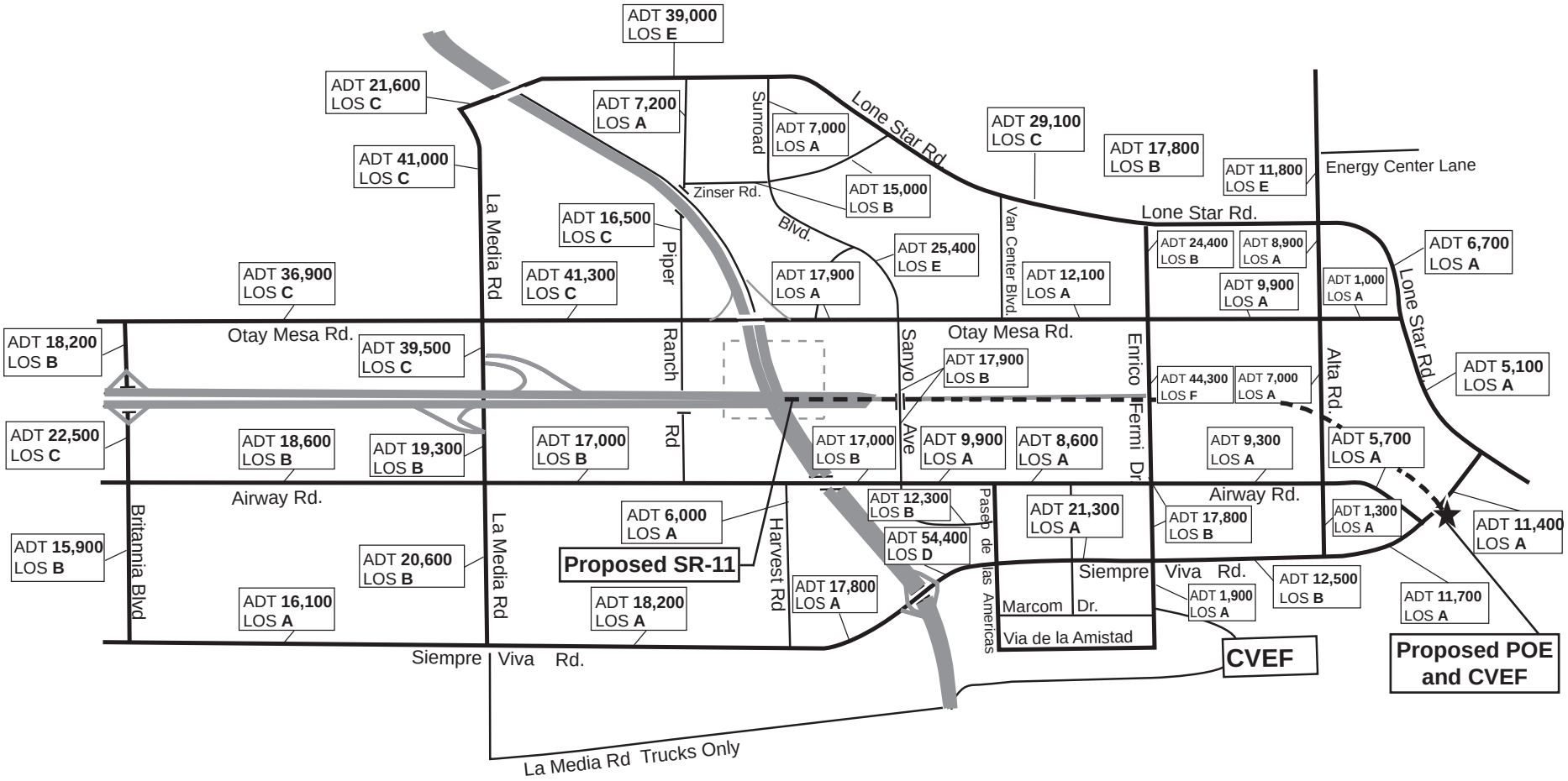

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-7_2015_ADT_LOS_NoInt.indd -KF

# 2015 ADT and LOS - No Interchange Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-7



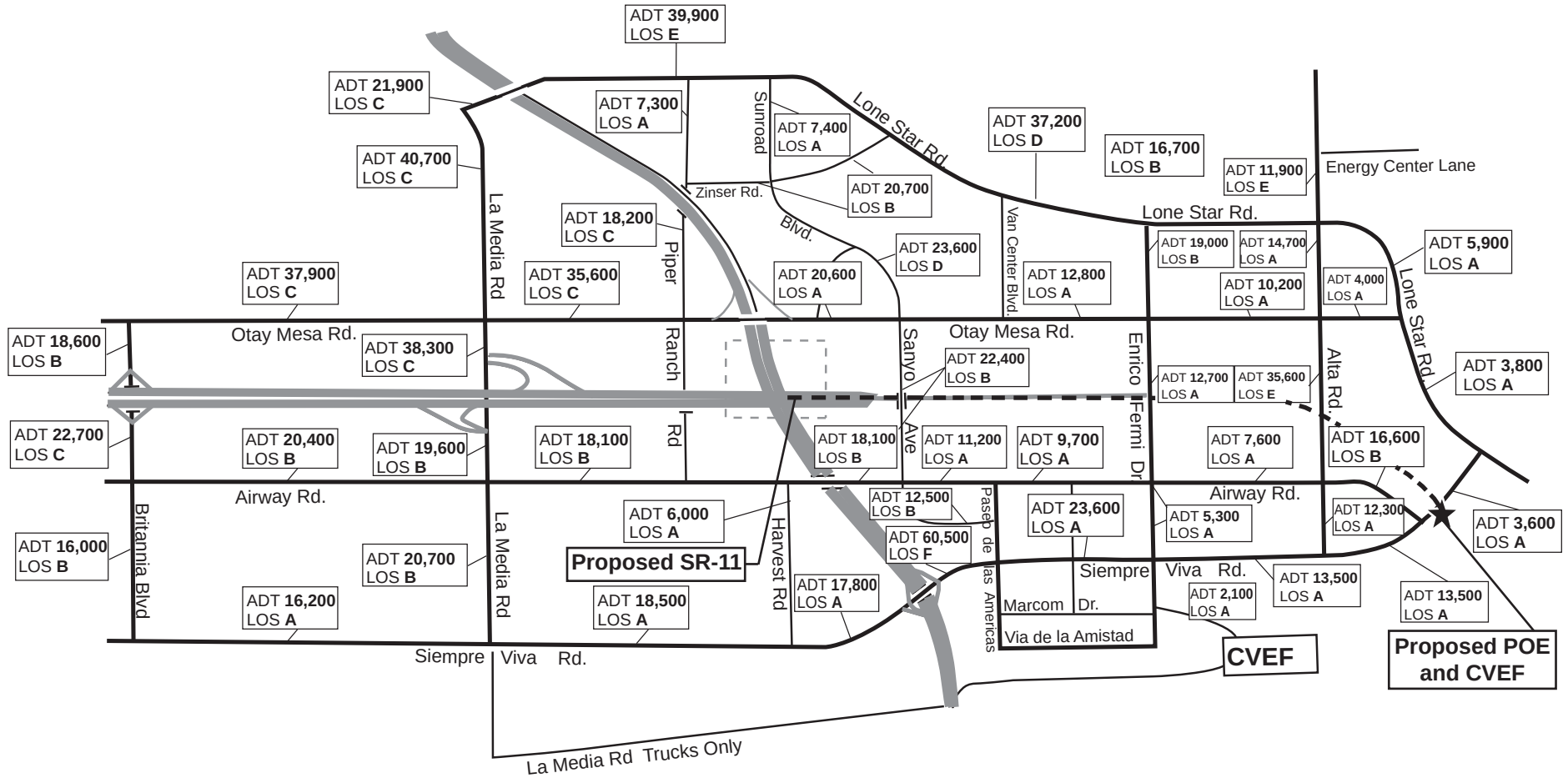

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-8_2035_ADT_LOS_TwoInt.indd -KF

# 2035 ADT and LOS - Two Interchange Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-8



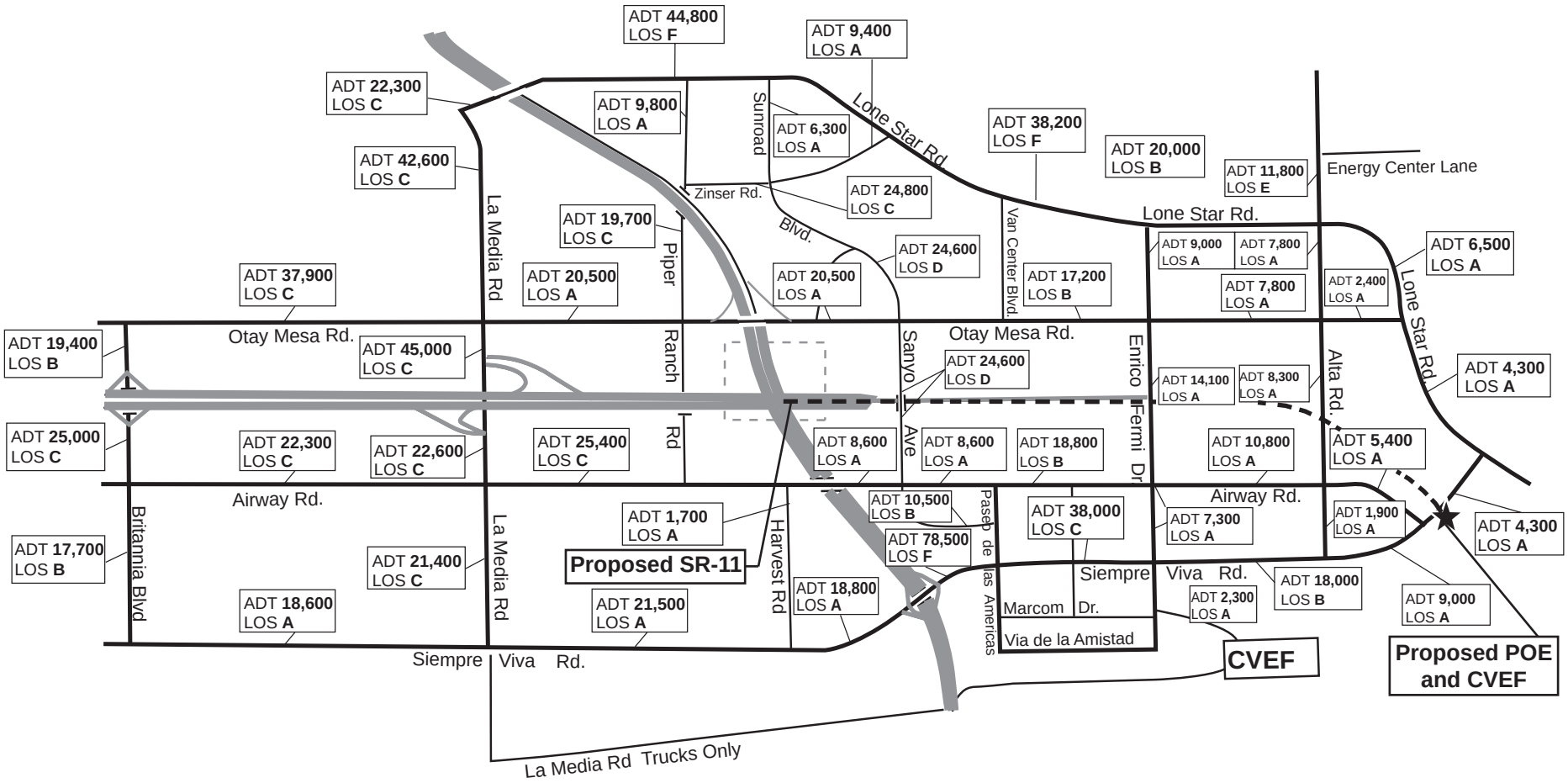

**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-9_2035_ADT_LOS_OneInt.indd -KF

# 2035 ADT and LOS - One Interchange Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-9




**ADT** Average Daily Traffic both directions.
**LOS** Level of Service rating at peak hours. *See Table 3.8-1 for description.*

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_8-10_2035_ADT_LOS_NoInt.indd -KF

# 2035 ADT and LOS - No Interchange Alternative

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.8-10

# 3.9 VISUAL/AESTHETICS

## 3.9.1 Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 USC 4331[b][2]). In its implementation of NEPA (23 USC 109[h]), FHWA directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities" (California Public Resources Code [PRC] Section 21001[b]). In addition, the California Scenic Highway Program is intended to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the state's scenic resources. A State Scenic Highway is any designated freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. A scenic designation is determined by the local jurisdiction after consideration and evaluation of how much of the natural landscape a passing motorist sees and the extent to which visual intrusions (e.g., buildings, unsightly land uses, noise barriers) impact the "scenic corridor." The state of California has adopted policies related to the protection of scenic corridors that guide planning and project development toward the use of context sensitive solutions to preserve scenic resources. No officially designated state scenic highways are located within the Otay Mesa area (Caltrans 2009a). There also are no County priority scenic routes in the area.

Visual resources have been evaluated in accordance with the FHWA *Visual Impact Assessment for Highway Projects* (FHWA 1981). This analysis provides the basis for conformance with each of the above regulations. Basic steps in the process include defining the project setting and viewshed, analyzing the visual character and quality of existing resources, predicting viewer response, identifying project-related impacts and mitigation to reduce adverse visual effects.

## 3.9.2 Affected Environment

This section is based on the project VIA prepared by HELIX (2010a). The visual setting, or regional landscape, provides a frame of reference, or baseline, for determination of project-related visual effects. The text below summarizes primary visual elements along the project site (which includes both the proposed SR-11 alignment and the SR-905 [under construction] alignment, as well as the POE, and CVEF), including identified scenic resources in the area, and also describes the analytic tools of the landscape unit and viewshed, as well as anticipated viewer sensitivity and key views.

### Visual Setting

The proposed project is located on the relatively flat Otay Mesa west of the San Ysidro Mountains, and includes previously graded areas and/or developed sites along SR-905 and the western portion of proposed SR-11, as well as small hills and valleys varying in elevation by approximately 50 feet in the easternmost portion of the project. This eastern area also overlays portions of two ephemeral streambeds and one intermittent streambed. Elevations within the project limits range from approximately 490 feet above MSL at the far western extent to 760 feet above MSL in the far northeastern corner of the proposed POE, encompassing a portion of an abutting hill. The portion of SR-905 between SR-125 and Britannia Boulevard that would be modified by the proposed project is currently under construction.

The eastern portion of proposed SR-11 and the CVEF and POE sites contain blocks of undeveloped areas almost entirely vegetated with non-native (and small patches of native) grasses and traversed by multiple dirt roads and paths. Vegetation generally is low growing and brown most of the year, except in the springtime or following rain events, when it turns green and blooms with yellow or white flowers. These generally uniform, undeveloped areas have visual continuity with the surrounding undeveloped gentle hills and valleys on the mesa, which also are mainly vegetated with low-growing grasses. Some scattered, dark green trees near the topographic low spots accent the brown expanse of vegetation. The locations of photographs depicting the visual setting are shown on Figure 3.9-1, *Photo and Key View/Simulation Locations.*

The westernmost portion of proposed SR-11 would extend between existing buildings just east of Sanyo Avenue. These industrial complexes are typical of Otay Mesa development, consisting of large, low (generally two-story or smaller) structures, often with tilt-up concrete walls. Most buildings in the area are white or light gray with few details or variation, and are surrounded by parking lots. Few trees or landscaped areas exist within the parking lots or near the buildings, although a landscaped buffer consisting of a lawn-covered berm and evenly spaced trees borders Sanyo Avenue and the access roads. Figure 3.9-2, *Site Photographs 1 and 2*, illustrate typical buildings near the project site. Similar buildings, parking lots and sparse landscaped areas exist on either side of SR-905 (under construction) to the west of the SR-905/SR-125 Interchange.

This type of development is characteristic of Otay Mesa; the industrial lots extend westward and southward from the project site, with a few small developments to the north and ongoing development to the east. Additional land uses in the area include automobile and/or equipment yards and a municipal small-airplane airport (Brown Field). The project site overlays a portion of a temporary vehicle auction yard on the north (Photograph 3, Figure 3.9-3, *Site Photographs 3 and 4*). A power generating station at Otay Mesa Road and Harvest Road abuts the northern project boundary (Photograph 4, Figure 3.9-3), and another north of Airway Road, between Harvest Road and Sanyo Avenue, is located near the southern project boundary. A larger power plant is operating east of Alta Road, and two prison facilities are located approximately three miles north of proposed SR-11. Several private businesses and residential properties are also located in the vicinity. Three private residences are located on the north side of Old Otay Mesa Road, approximately midway between SR-125 and Alta Road. Figure 3.9-4, *Site Photograph 5*, illustrates a typical view of this cluster of residential buildings as seen from Otay Mesa Road; the buildings and dense ornamental trees abut the roadway and are surrounded by currently undeveloped lots.

The CVEF and POE site is located at the U.S - Mexico international border, which is visibly delineated by tall border fencing. Houses, industrial buildings, and other development within Mexico abut the border in this area. Structures within Mexico are visible both from the mesa on the U.S. side, and higher points in the surrounding area, such as the foothills east of the project site. On the U.S. side of the border, the CVEF and POE site are undeveloped, and support non-native grasslands typical of the area. The vividness and expansive scale of the grasslands is emphasized by their contrast with the visible development in Mexico. Figure 3.9-5, *Site Photographs 6a and 6b*, illustrate the primarily undeveloped nature of the CVEF and POE sites and a portion of eastern SR-11. Dirt roads transect the area. The vehicle auction yard and power plant are visible (Photograph 6a). The San Ysidro Mountains make up the background of the eastern portion of the panoramic view. More distant mountains in Mexico are visible farther south (right side of Photograph 6b). The border is discernable due to the change (intensification) in land uses to the south.

Figure 3.9-6, *Site Photograph 7*, is a panoramic picture taken from Otay Mountain Truck Trail, and provides an overview of the entire study area. As can be seen in this 2009 photograph, large portions of the study area are undeveloped, covered in low-growing grassy vegetation, and bisected with multiple dirt

roads. The western portion of the site (to the right of the photograph) extends into the more developed portion of Otay Mesa. As noted, the U.S. - Mexico border abuts the southern edge of the POE site, and is discernable from this viewpoint mostly by the change in land use. The vehicle auction yard, the power plant, one of the state prison facilities in the area, and other nearby development also are visible in this overview.

**Scenic Resources**

A San Diego County Resource Conservation Area (RCA) for Biologically Sensitive Lands Overlay is designated over most of the San Ysidro Mountains that lie to the north and east of the project site. The Otay Mountain Cooperative Land and Wildlife Management Area and the Bureau of Land Management (BLM) Otay Mountain Wilderness Area, National Wilderness Preservation System land also overlay areas to the east within the mountains. The Otay Mountain Truck Trail, which transects the mountains, is a graded, gravel-paved roadway mainly used by border patrol agents; some mountain bikers and off-road vehicle motorists also use this road. The trail provides access to and across the BLM land and wildlife conservation area at Otay Mountain. The foothills are visually dominant from the mesa, due to their greater topographic variation than usually seen across the mesa top. The hills appear to be generally uniform in color and texture when viewed from the mesa, with topographic form and line taking precedence over changes in color or texture related to vegetation. They also block views of mountains or canyons further to the east; the peak of Otay Mountain and the RCA and BLM areas are not visible from the vicinity of the project alternatives.

The Otay River Valley, which comprises the northern edge of the Otay Mesa, is approximately 2.5 miles north and northwest of the project alternatives. Johnson Canyon and O'Neal Canyon are two canyons designated conservation/limited use areas in the San Diego County subregional plan. While notable topographic features, these canyons are downslope at some distance from the project site and as a result, are not visually accessible to an on-site viewer or from the immediately surrounding area. Besides these areas, the closest mapped public recreation areas include the Lower Otay County Park and the Otay County Open Space Preserve approximately six miles to the north of the project. These two San Diego County facilities are located within the Otay River Valley. Due to their distance from the project site and their lower elevation, these sites are not visible from the project site or the immediately surrounding area.

As stated above, no officially designated state scenic highways or County priority scenic routes are in the area.

**Landscape Units**

A landscape unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. A landscape unit will often correspond to a place or district that is commonly known among local viewers. The project alternatives are located within a single landscape unit that is generally defined by the San Ysidro Mountain foothills on the east, Tijuana River Valley and I-5 on the west, and Otay River Valley on the north. Visually, the landscape unit extends southward to hills and mountains in Mexico and includes development in Tijuana. Jurisdictionally, however, the landscape unit ends at the border.

**Viewshed**

A viewshed is a subset of a landscape unit and is comprised of all the surface areas visible from an observer's viewpoint. The viewshed is defined by the visual limits of the views from the proposed

project, and also includes the locations of viewers with the potential to be affected by visual changes resulting from project features.

The project viewshed, shown in Figure 3.9-7, *Viewshed Map,* was delineated through computer-aided and field-verified analysis of the topography on site and in the surrounding area and does not consider physical obstructions that can limit the viewshed in local areas, such as buildings, small variations in topography, and vegetation. Additionally, beyond one mile, atmospheric conditions limit clarity and visually mute the details of topographic variation, highway facilities, and structures such as overcrossings or bridges and ramps. The viewshed shown in Figure 3.9-7 is based on the Two Interchange Alternative, which is the alternative occupying the greatest acreage. The One Interchange Alternative would involve more R/W at Alta Road, but less at Enrico Fermi Drive, but the viewshed would be similar. Most variations would occur within the previously approved SR-905/SR-125 Interchange R/W and/or the proposed SR-11 R/W; the exception would be the Siempre Viva Road Full Interchange Variation, which would require more R/W at this interchange than the baseline Two Interchange Alternative, but the viewshed would be similar. If an alternative or variation with a smaller footprint is selected, the project may be visible from fewer areas than depicted in this graphic.

The analyzed footprint is more than four miles long. Views from any one area toward the project can be assumed to be of the portion of the project closest to that point. For example, views from the areas near Britannia Boulevard and La Media Road would be of the westernmost portion of the project, rather than of project features east of SR-125, and vice versa. Within the U.S., a one-mile radius centered on the project site is marked on Figure 3.9-7 for reference purposes. Although the intense development on the Mexican side of the border in this area is visually dominant in views to the south from the project study area, this discussion focuses on areas within the U.S. and under Caltrans/local agency planning jurisdiction.

As indicated in Figure 3.9-7, the land use study area would be visible from much of the undeveloped area surrounding the project site and from some of the developed portions of the mesa that are farther from the study area, such as near Siempre Viva Road, the power plant, and the Donovan State Prison. The viewshed also indicates that the study area may be visible from portions of the major roads in the area, such as Otay Mesa Road and Alta Road. Small hills and berms bordering Otay Mesa Road, however, block views to the south along portions between Alta Road and Sanyo Avenue. Similarly, the north-south trending Alta Road varies in elevation enough to block extensive southward views from near the power plant.

Most of SR-905 and Otay Mesa north and south of SR-905 are highlighted as being within the viewshed due to the generally flat and gently varying topography of the area. Physical obstructions, such as buildings and landscaping, and an increasing distance, however, would restrict views of the study area to east-west oriented streets from this area. Traffic, atmospheric conditions, and local topographic variations also would restrict views from this area.

North and east of the study area, the viewshed generally is limited by the south- and west-facing slopes of the San Ysidro Mountain foothills. The varied topography limits visibility westward to the study area from most of the undeveloped areas of the mountains and foothills. The Otay Mountain Truck Trail, a gravel road used for recreational purposes, transects the San Ysidro Mountains in a generally east-west direction, and is located north and east of the project site; portions of the road provide views of the study area, as illustrated in Photograph 7, Figure 3.9-6 discussed above. It also may be possible to view the study area from some peaks and slopes farther to the north and east; however, these undeveloped areas have few access roads and generally are not heavily used for recreation.

As noted above, the project site is not visible from the southern edge of the Otay River Valley, or from the slopes of Johnson and O'Neal canyons. Intervening topography prohibits any views of the site from the County recreational facilities within the Otay River Valley.

**Visual Character and Quality**

Visual Character

Visual character is descriptive and non-evaluative, which means it is based on defined attributes that objectively are neither positive nor negative. This objective character includes both pattern elements such as form (e.g., mass), line, color and texture; as well as pattern character, including the dominance, scale, diversity or continuity between these elements. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change (i.e., if there is public preference for existing visual character and resistance to changes contrasting with that character, then those changes in the visual character may be evaluated as negative).

The visual environment of the eastern portion of the project site, the CVEF and POE site, and the immediate surrounding area not currently subject to development is characterized by the flat topography and low-growing and generally uniform vegetation, which provide little variation in terms of color or texture. The topography and vegetation become more varied to the east of the project site where the San Ysidro Mountains are visually dominant. The low hills stretching between the mountains and the mesa top are increasingly larger and more visually prominent from west to east. The canyons and Otay River Valley north and west of the project site are dominant landmarks in the area, although they descend below the mesa, and are therefore not visible from the project site.

The more central and western portions of the project site extend through developed areas of Otay Mesa that are visually characterized by dominant buildings, large trucks and other vehicles, and parking lots. The trees and landscaped areas that surround each developed lot provide some visual variety but generally are not dominant features. While notably different in scale and mass from undeveloped portions of the mesa, these uses are fairly visually consistent among themselves. Where developed lots lie adjacent to undeveloped lots, or where undeveloped lots are surrounded by developed areas in the outlying areas, the visual diversity is high.

The few residential lots in the area surrounding the project site are small in scale relative to the industrial development, and are separated by large areas of open space. These lots are not visually dominant elements within the landscape, but do contribute some variation of pattern elements (line and color) through such features as rows of trees edging a roadway or a small copse of trees associated with the dwelling. These can be notable in this otherwise very horizontal and xeric (i.e. extremely dry) landscape (refer to Photograph 5, Figure 3.9-4, discussed above).

Visual Quality

Visual quality can be evaluated by identifying the vividness, intactness and unity present in the viewshed, which can be defined as follows:

1. Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

2. Intactness is the visual integrity of the natural and man-built landscape, and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

3. Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual manmade components in the landscape.

The eastern portions of SR-11 and the CVEF and POE sites, comprised largely of undeveloped grasslands, are situated between the developed mesa and the San Ysidro Mountains. As noted above, development is beginning to expand eastward, creating some patchwork areas where a developed lot is surrounded by undeveloped grasslands or an undeveloped parcel is surrounded by development. Taken one parcel at a time, the grasslands are neither visually powerful nor memorable. Put together over a large area, however, the expanse of relatively flat areas is visually impressive and memorable as an open space area. The San Ysidro Mountains and foothills also are visually dominant and memorable and have high vividness. In contrast, the developed areas have low visual vividness; the buildings are neither unique nor memorable, and taken together they do not comprise a distinctive space. Generally, the openness of the landscape allows a viewer to observe these disparate elements at the same time, and the combination of the low vividness of the developed areas, the moderate vividness of the grasslands, and the high vividness of the mountain range results in a moderate level of vividness for the project site and the immediately surrounding area.

The undeveloped flat grasslands also demonstrate high visual intactness. These areas generally have high visual continuity, exhibiting little topographic diversity and low levels of change in scale, as well as very little variation in line, form, color, or texture. The mountains also have high visual intactness; they are free from buildings or other developed aspects that would otherwise distract from their visual dominance. Power lines and supporting structures, though tall when in the foreground of a view, are visually dwarfed by the dominant hills from most vantage points in the viewshed, and become small elements that do not distract from the open space surrounding them. The border to the south, beyond which developed areas east of Tijuana are visible, and the industrial areas of Otay Mesa to the west create visual boundaries to the grasslands. These industrial areas, though visually composed of diverse elements, are also highly intact; Otay Mesa has design guidelines that regulate the look and character of the buildings and landscapes. Though directly bordering each other, the distinct change from undeveloped to developed visual environments does not distract from the intactness of either, and the contrast tends to heighten the visually intact character of each--resulting in moderately high visual intactness overall.

The undeveloped areas within and surrounding the project site have high visual unity. Although the buildings and lot layouts of the industrial areas in the central and western portions of the site are visually similar to each other, the trees and landscaped areas, where present, contrast with the buildings. The industrial areas, therefore, have moderately high unity. The developed areas are not designed to integrate with the grassland or mountain areas. Seen together, the coherence of these components, and therefore their visual unity, is moderate. The project site includes both industrial lots and undeveloped grasslands with high unity. As a result, overall the project site has moderately high unity.

Taken together, the moderate level of vividness, moderately high intactness, and moderately high unity combine to suggest that the project site has moderately high visual quality.

**Existing Viewers: Exposure and Sensitivity**

Viewer response is composed of two elements: exposure and sensitivity. Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity,

duration of the view, speed at which the viewer moves, etc. Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to change in the visual resources that make up the view. Different viewer groups have different view exposure (orientation or duration of view) as well as sensitivity to that view (e.g., in general terms residential viewers are usually more invested in views from their homes than an individual making a one-time business visit to an area would be in the same view).

Existing viewers of the proposed project alternatives mainly are motorists on local streets and workers and visitors to local businesses. The existing and projected numbers of motorists on each potentially affected roadway are detailed in Section 3.8 of this EIR/EIS, with the most traveled roads within the viewshed including Otay Mesa Road, Siempre Viva Road and La Media Road. Exposure of existing motorists on local roadways depends on the roadway on which they are traveling, and in which direction. For example, eastbound motorists on SR-905 near the planned SR-905/SR-125/SR-11 Interchange, the proposed SR-11/SR-905 connectors, and the proposed SR-905 improvements have direct views of the study area and potentially could experience high exposure. These areas are limited, however, and the length of time motorists would view the project area would be brief. Overall exposure for this group would be moderately low.

Patrons and employees of local businesses and industrial buildings in the project area may be motorists, but also may view the project area from their places of business. Their attention and awareness presumably is focused internally. Although they may be aware of views, especially if familiar with the surrounding area; their sensitivity is assumed to be moderate. Where views toward the project site are available, they could be of moderate duration, depending on the viewer's activity. For example, some lots may include break areas or parking lots from which the highway may be visible. Viewer exposure is moderate.

Existing local roadways near the western extent of the proposed project mostly extend between buildings and developed lots, and provide few views of the undeveloped areas within and near the study area; motorists on these roads have low exposure to the project site. Near the eastern extents of the study area (e.g., on Otay Mesa Road near its terminus, on Alta Road, Enrico Fermi Place, or the eastern extent of Airway Road), views to the extensive grassy, flat areas within the study area are more available, but the numbers of viewers drop.

Motorists' sensitivity similarly would be mixed. Most motorists on existing local roadways presumably are workers at the local businesses, power plant, and correctional facilities, or visitors to the correctional facilities and patrons of the businesses. Their attention likely is focused on their respective destinations, and while they may be appreciative of the views available from these roadways, they generally are not seeking a recreational experience. Viewer sensitivity also can be affected by the viewer's perception of the highway's appropriateness within a landscape. As most motorists would be using the new and improved roadways to access their business location or the proposed border crossing, it is expected that they would see the road as an appropriate and necessary element in the mesa landscape. As a result, it is expected that they would have low sensitivity.

Very few recreational motorists may be able to see the existing project site from the Otay Mountain Truck Trail, which provides access to the BLM preserved areas of the San Ysidro Mountains. Panoramic views of Otay Mesa are available from parts of this trail, and recreational users of this road could have high sensitivity. Border patrol agents, while focused on the view from this roadway, cannot be considered as having the same sensitivity as recreational motorists. While their speed of travel would be low, necessitated by the unpaved and winding condition of the road, user exposure from this roadway would be low, due to their low number (excluding the border patrol, less than 1,000 recreational drivers use the

road per year) and the few overlook areas available on the roadway. Awareness of and sensitivity to views that include the project alternatives would be moderate; unless stopped at an overlook point viewers would be focused on the rugged roadway.

Excluding the Truck Trail, few pedestrians and bicyclists utilize the area surrounding the project site due to the large scale and industrial traffic mix. Existing uses are not of a type or scale to encourage pedestrian travel, with the result that the viewer group is small and has a low exposure to the project site. The proposed project may attract pedestrians, particularly those using public transit or long-term parking near the border, but these viewers generally would be contained within the project site after development. Pedestrians and bicyclists may have more opportunity to view the project site and surrounding area due to their slow travel speeds, and would have a moderately high sensitivity to changes in the surrounding area and potential loss of views toward the nearby mountains. As with motorists, however, the pedestrians and bicyclists using the new POE would see the proposed project elements as an appropriate and necessary element in the mesa landscape, and as a result, it is expected that they would have low sensitivity.

Three residential properties are within the project viewshed. This small viewer group experiences long view exposure due to their stationary viewing angle. They are expected to have moderately high sensitivity, due to their familiarity with the area and their concern for view composition from their homes.

**Key Views**

Because it is not feasible to analyze all the views in which the project would be seen, several key viewpoints most clearly displaying the visual effects of the project have been selected. Key views represent typical views seen by the most viewers and the primary viewer groups that would potentially be affected by the project. As such, they provide focused analysis of a definable unit, but are representative of changes project-wide. Information provided about key views below is supported by more detailed discussion in the project VIA. Key view locations are depicted on Figure 3.9-1. Selected views include:

- South of the termini of Alta Road and Otay Mesa Road, looking south
- On the project site east of Alta Road, looking west at the proposed Enrico Fermi Drive Interchange
- On the project site near the future northwest edge of the POE, looking northwest at the proposed Siempre Viva Road Interchange
- at the end of Airway Road, looking east
- On Sanyo Avenue north of Airway Road and SR-905, looking north
- Within the proposed project R/W, east of Sanyo Avenue, west of Enrico Fermi Drive, north of Airway Road, and south of Otay Mesa Road, looking west

These six views were used as the basis for visual simulations that represent the proposed improvements. Following the key view descriptions, five additional key view points for which specific project analysis was undertaken are described. These locales include Enrico Fermi Drive, an additional location on Sanyo Avenue, Otay Mesa Road, and the proposed border entry point and toll road facilities.

Key View 1

Key View 1 (Figure 3.9-8, *Key View 1/Simulation 1*) was taken south of Otay Mesa Road from the unpaved portion of Alta Road, looking southeast toward the U.S. - Mexico border. The visual character of Key View 1 predominantly is undeveloped and mostly flat, with pattern elements being more simple than complex. The view encompasses curvilinear and fluid lines, but also rigid and rectilinear lines. The view generally is comprised of earth-toned colors. The scale of this view generally is open and

expansive, with dominant but not encroaching elements such as low-lying vegetation and unpaved Alta Road.

The vividness of Key View 1 is moderate because the combination of the elements within the view does not create visual patterns with distinct visual power. The intactness of the view is moderately high; the unpaved road contrasts somewhat with the vegetated open space, yet it does not visibly encroach into the visible open space, or detract from the visual integrity of the expanse of vegetation. The unity of the view also is moderately high; the few elements composing the view generally are harmonious and have high visual coherence. Overall, Key View 1 has moderately high visual quality.

Key View 2

Key View 2 (Figure 3.9-9, *Key View 2/Simulation 2)* represents a point within the proposed SR-11 R/W between Alta Road and Enrico Fermi Drive. It represents a westward-facing view of the area where the proposed roadway would be. The existing view is almost entirely composed of an existing manufactured slope, on top of which is a fence and shipping containers. The view is primarily earth-toned. It contains geometric forms and lines, and the texture is somewhat irregular. The scale of the view generally is large, although smaller vegetation is visible. Diversity is low, because the view primarily is comprised of the embankment, with some small variation due to the vegetation, the fence and the shipping containers. Generally, the few elements within the view are consistent, and the continuity is relatively high. The view is not open and extensive because it is so close to the embankment; on the other hand, the relatively few elements are visually balanced.

There are no memorable elements or distinct visual patterns present, resulting in low vividness for this key view. Intactness and unity are moderately high. There are few elements, and although the shipping containers contrast with the slope, the slope and its strongly horizontal horizon line appear manufactured, and the geometric containers therefore do not visually encroach into the visual environment of the area. The composition of the few elements generally is symmetrical and coherent. Overall, Key View 2 has moderate visual quality.

Key View 3

Key View 3 (Figure 3.9-10, *Key View 3/Simulation 3)* was taken from the northwest edge of the proposed POE site and the southeastern extent of proposed SR-11. The view looks northwest across gently varied flat areas covered with low-growing vegetation.

The grass-vegetated, gentle slope in front of the viewer dominates the visual character of Key View 3. The view does not encompass complete visual forms, but what is visible generally is geometric, with curvilinear lines, earth-tone colors, and irregular textures. The scale of the view is large; the undeveloped areas appear extensive on all sides. Diversity is low, and continuity is high.

Although the visual character of Key View 3 is not highly vivid or memorable, the view is unique because unlike most areas in the viewshed, no development is visible. The expanse of open space represented by this view is vivid, with distinct visual power, especially when contrasted with local development. The intactness of the area is high; the vehicle tracks visible in the vegetation in front of the viewer and unpaved roads do not encroach into the area, but serve to highlight the undeveloped characteristics of the area. Similarly, the view and the open space areas have high unity, with high visual coherence. Overall, Key View 3 has high visual quality.

Key View 4

Key View 4 (Figure 3.9-11, *Key View 4/Simulation 4*) was taken from the east end of Airway Road, east of Enrico Fermi Drive, looking east. It encompasses an expansive view of the undeveloped areas of East Otay Mesa. The undeveloped, varied topography of the eastern edge of the Otay Mesa area makes up the visual environment of Key View 4.

Key visual pattern elements include the complex forms of the dominant mountains in the background. The undeveloped and relatively flat areas in the foreground have less variation of form than the mountains that comprise the background, yet the curves of the unpaved roads in the view reveal some variety of form. The mountains in the background also have dominant curvilinear and fluid lines. The colors within the view predominantly are natural greens, browns, blues, and purples; the development in Mexico, the only other man-made element besides the unpaved roads, appears blue and purple in the haze of distance. The textures within the view generally are smooth due to the distance of the viewer from the main elements; the surfaces within the view, however, are more natural than hard, and textural variety is visible.

The scale of the visual environment of Key View 4 is large and monumental and the view is expansive and open. While not highly complex, it also is not monolithic. Pattern elements are consistent and harmonious, and the view generally is balanced between background and foreground elements. The open, natural character of the area is reinforced by the contrast with the extensive development on the Mexican side of the border.

The expansive flat areas and dominant mountains that are the main elements in this view are distinct components with visual power and memorability. The view has few encroaching elements and the elements in the view generally are visually coherent and the view is compositionally harmonious as a whole, although the contrasting road detracts slightly from the unity of the view as a whole. Overall, Key View 4 has high visual quality.

Key View 5

Key View 5 (Figure 3.9-12, *Key View 5/Simulation 5)* was taken from the center of Sanyo Avenue, north of Airway Road, looking north. The visual environment of Key View 5 generally is geometric and rectilinear. There are few building elements present in the view, yet most of the elements within the view are introduced rather than natural. Examples include the flat road, the manufactured slopes associated with business park and light industrial development, the commercial signs on the right the graded areas in the background. The view generally is composed of hard surfaces and smooth textures, including the surface of the road and sidewalks, the even surface of the graded areas in the background, and mowed lawn. Trees provide variety of form, line, color, and texture, and are prominent elements in the view that contrast with the smooth, manufactured surfaces in the view. Man-made elements are dominant.

The overall scale of the view is large, due mainly to the perspective of the roadway and the expanse visible to the left and in the background. The sidewalks and trees visible in the view are human-scale elements that render the view not quite monumental in scale. Key View 5 has diverse elements, including landscaping and commercial signage. These elements are not highly complex; neither are they highly harmonious. The undeveloped areas contrast with the developed slopes and landscaping, and with the smoothly-graded area in the background. The view is somewhat balanced, split between developed and undeveloped areas; however, the landscaped areas and the roadway are more dominant features.

The combination of elements comprising this view does not create a distinct visual pattern. The hills in the background are the most memorable elements, but are not dominant. Overall, vividness is moderately low. There are no encroaching elements within the view, and the developed and undeveloped areas are distinctly separated, with little visual coherence; intactness of the view is moderate. The elements are not harmoniously composed, and the unity of the view is moderately low. Overall, Key View 5 has moderately low visual quality.

Key View 6

Key View 6 (Figure 3.9-13, *Key View 6/Simulation 6)* was taken within proposed project R/W north of Airway Road, south of Otay Mesa Road, and east of Sanyo Avenue, looking west. The character of Key View 6 is geometric and symmetrical; dominant structures in the view are the boxy, white, light industrial buildings on the parcels in front of and below the viewer. The slope in the foreground and the manufactured slope to the viewer's left also are simple and smooth. Similarly, the view is composed of rectilinear and rigid lines. Trees and vegetation near the buildings somewhat soften the edges of the paved areas and the structures, and the dark green trees extending through the center of the view provide a contrasting element to the developed lots on either side, along with the brown vegetation in the foreground which offers some textural variety.

The scale of Key View 6 generally is large; each of the elements that comprise the view is big. The scale of the view is limited by the foreground elements, however, which confine views to the periphery. Although the diversity of elements is not high, the compositional arrangement of elements is not highly harmonious. The view is generally open.

The view has no highly memorable elements and the buildings and open spaces do not combine to create highly memorable patterns. The arrangement of the elements is typical of the area. Large buildings and associated large parking lots are located next to undeveloped lots, with landscaping around the edges. The landscaping does not extend to all lots in the area, and although there is nothing that visually encroaches on any elements in the view, intactness is not high because of the mix of visible developed and undeveloped lots. There is visual coherence between and among the elements, and although the compositional harmony is not unique or memorable, it is unified by the similar type of development visible. As a result, the unity of the view is moderately high. Overall, Key View 6 has moderately low visual quality.

Additional Key Views

The preceding primary key views represent typical views seen by the most viewers and the primary viewer groups and represent those key views selected for visual simulations. Additional key views that represent potential changes to the visual environment are discussed below.

*Enrico Fermi Drive (Key View 7)*

Enrico Fermi Drive extends north-south and is the only north-south roadway that connects Otay Mesa Road and Airway Road between Sanyo Avenue and Alta Road. Enrico Fermi Drive slopes upward to a high point approximately half way between Otay Mesa Road and Airway Road. The existing visual environment primarily consists of a two-lane road through a mostly undeveloped area. The east side of the road is recently graded, and street trees and a sidewalk have been installed along the roadway (see *Key View 7*, Figure 3.9-14, *Key Views 7 and 8*).

Views along the road include the road and undeveloped areas on each side, as well as a high horizon line created by the hill over which Enrico Fermi Drive extends. Geometric forms and strong perspective lines are present, including the dark gray color and smooth texture of the roadway, and the green and brown earth-tones of the bordering vegetation. The diversity of the visual environment is relatively low, consisting mostly of the road and vegetation bordering it, with no dissonant elements. There are generally no prominent visual elements, and although the developed and undeveloped lots on each side of the roadway contrast, they are symmetrically arranged within the view. Peripheral views to the east and west are available from Enrico Fermi Drive, particularly near the high point, and viewers can see the mountains east of Otay Mesa, which are vivid features, but not dominant in northward and southward views.

The visual elements have visual coherence and are somewhat harmonious, although the inconsistent development patterns leave discontinuous open space areas. The visual integrity of the area is moderate for this reason, although there are no elements visually encroaching into the area. Despite the nearby vivid mountains in the east, northward and southward views along Enrico Fermi Drive have few memorable elements or distinct visual patterns. Overall, these views have moderate visual quality and character.

*Light Industrial Areas Accessed via Sanyo Avenue (Key View 8)*

Proposed SR-11 near the SR-905/SR-125/SR-11 Interchange extends between light industrial parcels developed with buildings, parking lots, auxiliary structures, and landscaping (visible in *Key View 6*, Figure 3.9-13, discussed above, and *Key View 8*, Figure 3.9-14). The parcels are accessed via driveways that intersect with Sanyo Avenue, and from Dornoch Court and Carnoustie Road. The driveway of the parcel immediately south of the proposed SR-11 R/W is visible on the right side of Key View 5, Figure 3.9-12.

The visual environment on these light industrial parcels is dominated by large, white or light gray, geometric buildings with rectilinear lines and smooth surfaces. The buildings are approximately 30 feet tall, with some taller features visible in some locations (such as the storage tanks on the south side of one building). Small trees are spaced regularly among the parking spaces in the parking lots. The western side of each parcel slopes down toward Sanyo Avenue and is landscaped with lawn and trees, and in some places dense shrubs also are planted along the upper edge of the slope. A drainage area is vegetated with dense green shrubs up to approximately eight feet tall, and supports some taller, dark green pine trees. Some taller trees also are located next to the sides of the buildings.

The buildings and parking lots comprise bulky visual elements within these parcels. The trees and shrubs lessen the visual scale of the buildings to some extent, but the overall visual environment is large-scale. The vegetation also provides variety and articulation where the buildings would otherwise be monolithic and monotonous. The vegetation, however, does not create a harmonious scene and the continuity of the visual environment within these lots is moderate. The buildings remain prominent features, and the visual environment is not highly balanced.

The area has little vividness or memorability; the buildings are standard light-industrial tilt-up concrete buildings with few distinguishing features, and the landscaping does not create distinct visual patterns. The parcels do have moderately high visual intactness as there are few other elements that encroach into the area. Because the vegetation does not combine with the structural elements to create a harmonious visual composition, overall the visual coherence and harmony of the area, and the resulting unity of this view, is moderately low.

*Otay Mesa Road (Key View 9)*

Otay Mesa Road is approximately one-quarter mile north of the project site. Some portions of the road are not within the project viewshed (Figure 3.9-7) due to topography that blocks views toward the south. Most viewers on Otay Mesa Road would be traveling east and west, with peripheral views to the south. Refer to *Key View 9*, Figure 3.9-15, *Key Views 9 and 10* for a view southward from Otay Mesa Road in the vicinity of Enrico Fermi Drive. This view also is representative of views available from the portions of the residential properties north of Otay Mesa Road. Visual character and quality along this stretch are similar to those described for Key View 1 and Enrico Fermi Drive, discussed above, which have moderately high and moderate visual quality and character, respectively.

*CVEF and Border Entry at New POE (Key View 10)*

The site of the proposed CVEF and POE currently consists of undeveloped land (see *Key View 10*, Figure 3.9-15). The area is mostly flat or has gentle topographic variations, and is covered with low-growing vegetation, rendering views expansive. The vivid San Ysidro Mountains and foothills are visually dominant. The existing double fence at the border is a dominant feature when looking south. Some of the large buildings in the densely developed area of east Tijuana, Mexico are visible through and beyond the fence. The open, natural character of the site is reinforced by the contrast with the fence and extensive development in Mexico.

There currently are very few viewers in the area. The general public has little reason to explore the unpaved roads east of the developed areas of Otay Mesa. As a result, U.S. Border Patrol agents are the most common viewers present at this time. Refer to Key Views 1 and 3, discussed above, for information related to similar visual quality. These key views have moderately high and high visual quality and character, respectively.

Additional Visual Considerations

*SR-905 Modifications to Accommodate SR-11 Connections.*

The portion of SR-905 that would be modified west of the SR-905/SR-125/SR-11 Interchange extends between industrial, commercial, and institutional (Southwestern College satellite campus) land uses, and vacant lots that are aligned with their main access focused toward streets north and south of the R/W. The visual environment of this area is similar to other developed portions of Otay Mesa in that it mainly consists of large boxy buildings surrounded by parking lots, multiple vehicles, and sparse landscaping (refer to *Key View 6*, Figure 3.9-13 and *Key View 8*, Figure 3.9-14, discussed above). These key views have moderately low visual quality and character.

*Toll Road Facilities*

Toll-road facilities (e.g., toll verification equipment on overhead structures) would be located along the roadway at the proposed Siempre Viva Road Interchange (Key View 3, moderately high visual character and quality) and Enrico Fermi Drive Interchange (Key View 2, moderately low visual quality and low visual quality), as well as within the additional view from Enrico Fermi Drive (moderate visual quality and character). The reader is referred to text addressing those Key Views for existing conditions information related to visual quality and character.

*Detention Basins*

Several detention basins would be included within the proposed R/W. One would be located north of proposed SR-11, east of the industrial buildings at Sanyo Avenue (near the location of Key View 6). Three others would be located south of the highway—one west of Alta Road, one between Alta Road and the Siempre Viva Road Interchange, and one southwest of the Siempre Viva Road Interchange. A fifth basin potentially would be placed in the area between the passenger lanes and the commercial lanes, directly northwest of the Siempre Viva Road Interchange overcrossing. Representative information related to visual character and quality is described for Key View 1 (south of Alta Road with moderately high visual quality and moderate visual character), Key View 3 (the site of the POE with high visual quality and moderately high visual character), and Key View 6 (east of Sanyo Avenue with moderately low visual character and low visual quality). .

### 3.9.3 Environmental Consequences

Using the Affected Environment discussion as a baseline, visual impacts are determined by comparing the existing visual environment to the post-construction visual environment and determining whether project-related physical changes would be incompatible or degrade existing visual resources. This is done by an objective assessment of visual resource change resulting from project implementation combined with anticipated viewer response to that change. Detailed discussion of predicted viewer response is provided in the project VIA.

**Build Alternatives**

As discussed in Chapter 2.0 of this document, several alternatives and design variations are being evaluated for the proposed project. The following impact analysis focuses on the largest and potentially most impactive alternative being proposed. Discussion of the other alternatives follows.

As stated above, no officially designated state scenic highways or County priority scenic routes are in the area. The proposed project, therefore, would not affect any current scenic routes.

Two Interchange Alternative

Currently developed areas with local roadways and undeveloped open space would have a new highway with associated interchanges, walls and grading, and a CVEF and POE with buildings, roadways, and associated facilities. Project implementation would result in noticeable changes between existing and post-project views. Changes to the visual environment, as well as the overall visual effect/aesthetics of the project, are discussed in the following analysis. Photo simulations illustrate the engineering elements of the project so the reader can track the discussion of the proposed change to the visual elements (scale, dominance, etc.) without having those elements obscured by screening vegetation. Photo simulations of structures do not reflect their final design, and are for visual example only. Project planning currently includes highway planting for erosion control purposes such as irrigated project slopes hydroseeded with drought tolerant shrubs and ground cover to provide soil stability and reduce runoff. Further landscape design would be developed to incorporate any necessary mitigation measures resulting from project impacts, and is anticipated to continue themes and aesthetic characteristics established for the SR-905 corridor.

*Key View 1*

Proposed project features visible in Key View 1 are illustrated in Simulation 1, Figure 3.9-8. The most visible portion of SR-11 would be the manufactured slopes (up to 20 feet tall) and associated planting on either side of the roadway. The proposed CVEF and POE would be located southeast of the location from which the picture was taken, and some portions of some of the buildings in the CVEF and the northeastern portion of the POE would be visible from Key View 1.

The proposed project would introduce highly contrasting elements into a view that currently is undeveloped land and open space; the level of change to the visual resources of the area would be moderately high. The viewers of the area, though few in number, would have a moderate level of response. The resulting visual impact to Key View 1 would be moderately high.

*Key View 2*

The proposed project as seen from a point within the proposed SR-11 R/W slightly west (into the visible slope) of the existing Key View 2 photograph is simulated in Simulation 2, Figure 3.9-9. The Two Interchange Alternative would introduce proposed SR-11, manufactured slopes approximately 18 to 25 feet high, the proposed Enrico Fermi Drive overcrossing and entrance and exit ramps, and would remove existing natural and introduced elements.

The Two Interchange Alternative would change the visual environment of the area represented by this key view. Nonetheless, the visible features of the Two Interchange Alternative, though different in composition from existing conditions, would have similar character and quality. The change between the existing and proposed view would be moderately low. Viewers of this area would have a moderate response to change in the visual environment. The resulting visual impact to Key View 2 would be moderately low.

*Key View 3*

The proposed project would replace the open space visible in Key View 3 with highway and interchange features (see Simulation 3, Figure 3.9-10). Key View 3 corresponds to a northbound lane in the proposed SR-11 alignment and would include highway lanes, the proposed Siempre Viva Road Interchange and overcrossing, and a loop ramp.

Proposed project features that would be visible in Key View 3 would create a moderately high change to the visual character of the area, but the resulting visual quality of the new features would be similar to existing conditions. Combining the changes to visual character and visual quality results in a moderate level of change. Viewers would have a moderate response. The resulting visual impact to Key View 3 would be moderate.

*Key View 4*

The elements of the proposed project that would be visible in Key View 4 would be in the middle-ground of the view, rather than the immediate foreground. Where SR-11 would curve from an east-west alignment to extend southeastward toward the proposed POE, a portion of SR-11 would be visible in Key View 4. The Siempre Viva Road Interchange would be visible in the center of the view, in front of the viewer, and portions of the CVEF and POE would be visible on the right side of the view. These elements are depicted in Simulation 4, Figure 3.9-11.

The proposed project elements, particularly the structural elements in the CVEF and POE, the interchange structures, and the visible portion of the grading for the roadway, would highly contrast with the surrounding currently undeveloped area. Introduction of these features would cause a moderately high level of change to the existing visual resources. The viewers in the area, though few in number, would have a moderate level of response to changes in views. The resulting visual impact to Key View 4 would be moderately high.

*Key View 5*

Proposed SR-11 would extend between lots immediately abutting Sanyo Avenue, and would cross over Sanyo Avenue. Due to the difference in elevation, the roadway would be supported to the west of Sanyo Avenue by slopes facing north and south. The undercrossing structure and slopes supporting the roadway would be visible from Key View 5, as illustrated in Simulation 5, Figure 3.9-12. Walls supporting proposed SR-11 east of Sanyo Avenue would not be visible from Key View 5.

The proposed project roadway, overcrossing, and slopes would have features similar to those currently existing, and although the new elements would increase the scale of the view and encroach on the visual environment of Sanyo Avenue, introduction of these features would cause a moderately low level of change to the existing visual resources. The viewers in the area would have a moderate level of response to changes in the views. The resulting visual impact to Key View 5 would be moderate.

*Key View 6*

The new roadway is simulated in Figure 3.9-13. The surface of the road would extend to the left and right of the viewer, as well as in front and away from the viewer; it would be at an elevation above the parking lots, slightly below the top of the buildings, and approximately the same as the top of the trees visible between the buildings in the existing key view.

The proposed project would replace views of existing undeveloped lots and vegetation growing between existing buildings with a roadway and associated features. Although the proposed roadway as seen from Key View 6 would have low visual quality and memorability, and would contrast with and encroach on the surrounding area, the existing view does not have high visual quality. The resulting change to the visual character and quality of Key View 6 would be moderate. Viewers of Key View 6 have a moderately high response to changes in the visual environment. The resulting visual impact to Key View 6 would be moderate.

*Additional Key Views*

Enrico Fermi Drive (Key View 7). Refer to Key View 7, Figure 3.9-14. The proposed project includes an overcrossing at Enrico Fermi Drive (Enrico Fermi Drive would cross over SR-11). The Two Interchange Alternative would have on- and off-ramps extending from the overcrossing to each side of the highway. Proposed SR-11 would cross under Enrico Fermi Drive at approximately the existing highest point along Enrico Fermi Drive. From north and south of the project site, Enrico Fermi Drive would appear to continue uninterrupted in front of the viewer (the elevation of the roadway may be slightly lower, but the change would not be highly discernable). The junction of the proposed interchange ramps with Enrico Fermi Drive would be the most visible aspect of the interchange. Viewers on Enrico Fermi Drive would see the intersection signals or signs, and the top of the proposed ramps. The ramps would slope downward on either side of Enrico Fermi Drive in the peripheral view. The top of the slopes on the opposite side of the freeway would be visible on either side of the overcrossing. The proposed features would not block views to the mountains in the east, and would not extend above the horizon line.

The visual quality of the area around Enrico Fermi Drive would be similar to the existing visual quality. Viewers in this area generally would be motorists on Enrico Fermi Drive. Viewer exposure and sensitivity would be moderately low. New highway features would be large in scale and potentially dominant, but would not be highly visible. Changes to views along Enrico Fermi Drive would be minimal. The low level of change to the visual environment near Enrico Fermi Drive in combination with the moderately low viewer response would suggest that the proposed project would create a moderately low visual impact in this area.

Light Industrial Areas Accessed Via Sanyo Avenue (Key View 8). Proposed SR-11 near the east side of the SR-905/SR-125/SR-11 Interchange would extend between light industrial parcels which are developed with buildings, parking lots, auxiliary structures, and landscaping. Proposed SR-11 would narrow to minimize the footprint that would overlap these parcels. The surface of the roadway would be higher in elevation than the surrounding lots and would be supported by retaining walls varying from approximately 16 to 26 feet high, beginning immediately east of Sanyo Avenue and extending approximately 1,250 feet to the east. The proposed retaining walls would cause the greatest amount of change to the visual environment of the parcel east of Sanyo Avenue and south of Carnoustie Road, illustrated in Key View 8 Figure 3.9-14. The visual quality of the parcel would be low, and the change from the existing visual environment would be high. The viewers of the proposed project and retaining wall that are present in this area would be workers in the buildings and patrons of the businesses, including truck drivers accessing the warehouse loading bays at the back of each of these buildings. Viewers in the area have a moderate exposure and sensitivity.

The proposed project would introduce features that would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue, particularly through the removal of vegetation and the introduction of a large retaining wall face. The viewers in the area would have a moderate response to changes in the area. The resulting visual impact would be moderately high.

SR-905 Modifications to Accommodate SR-11 Connections. The current design of SR-905 (under construction) overlaps a portion of Harvest Road between Airway Road and Otay Mesa Road. The approved alignment is planned to extend midway between Airway Road and Otay Mesa Road, westward from Harvest Road. The approved alignment also includes a connection to SR-125. Proposed SR-11 would include connections to approved SR-905 and modifications to the approved alignment to accommodate those connections (refer to Figure 2-2, and Figures 2-6a and 2-6b in Chapter 2.0). Additionally, the portion of Harvest Road south of proposed SR-11 and north of SR-905 would no longer be used. An off-ramp to La Media Road from the SR-11 connector also would be added on the northwestern quadrant of the interchange. These additions would be similar in appearance to the proposed SR-905/SR-125/SR-11 Interchange, and most of the modifications to accommodate SR-11 connections would not cause noticeable change.

Some of the modifications to approved SR-905 west of the interchange would occur in the highway median. The addition of more pavement in the center of the highway would not increase the visual prominence or potential impact of the highway, and there would not be noticeable changes to the design of the highway when viewed from the businesses north and south of the R/W. Less area would be available for planting in the median; however, this change would be only slightly noticeable to viewers traveling along the highway because some unpaved areas would remain visible in the median.

Other modifications to SR-905 would include the widening of the eastbound side of SR-905, between La Media Road and the SR-11 connector by up to 12 feet, and the widening of the westbound side of SR-905

in the same area by up to 24 feet. In addition, the southern (eastbound) connector would follow the approved off-ramp alignment for some of its length, but would curve approximately 110 feet further south, between SR-905 stations 627+00 and 641+00. These modifications would be similar in appearance to the approved SR-905 alignment, although they would introduce more pavement and reduce the landscaped areas. The difference would be most noticeable to viewers traveling along the highway, and less so for patrons and employees of nearby businesses. Overall, the modifications would increase the change to the visual environment caused by approved SR-905. This change would not be mitigable due to the loss of area available for highway planting. The change would have a moderate visual impact.

The portions of Southwestern College that could require a noise attenuation barrier are outdoor sports fields abutting the SR-905 R/W. The fields provide generally open southward views from the highway toward the buildings on the college campus. South and northward views are more limited west of the college where the R/W extends between light industrial parcels. These areas consist of large, geometric buildings surrounded by expanses of pavement and minimal landscaping. An undeveloped lot is located immediately north of Southwestern College, on the other side of the SR-905 R/W, and provides extensive northward views. The parcel east of the undeveloped lot is a commercial area with a variety of elements such as vehicles, buildings, landscaping, and signs.

The potential 10-foot-high noise attenuation barrier would be placed at the edge of the southern shoulder of SR-905 along the Southwestern College property. The barrier would be approximately 591 feet long. If constructed, the barrier would be a tall, geometric element that would be visually unique in the area. It would be located closer to the road than any other structure in the vicinity, and would restrict southward views from SR-905. This large-scale element would cause a moderately high level of change in the visual environment of SR-905 near Southwestern College.

SR-905 supports a high volume of traffic, indicating that viewer exposure in this area would be high. Viewers' sensitivity would be moderately low; the area is developed, although some extensive views are available, including views of the mountains east of Otay Mesa. The moderately high level of change caused by the potential noise attenuation barrier in combination with the viewers' high exposure and moderately low sensitivity suggests that the noise attenuation barrier would have a moderately high visual impact.

Otay Mesa Road (Key View 9). Proposed SR-11 generally would be lower than the existing topography, and the most visible feature of the proposed project from Otay Mesa Road would be the top of the slopes on the south side of SR-11 (primarily visible as a new horizontal line to the south). West of Sanyo Avenue, SR-11 would be elevated above the neighboring parcels. The slopes north of SR-11 would face Otay Mesa Road in this area, and would be visible as new manufactured slopes planted with groundcovers and shrubs for erosion control. The new roadway would not extend above the horizon line, and would not be a dominant feature in southward views from Otay Mesa Road.

The proposed retaining walls east of Sanyo Avenue would not be visible from Otay Mesa Road, as the existing buildings would block views toward the wall. None of the visible features of the proposed project would be dominant or cause a high level of change in the visual environment of the road. The resulting visual impact would be low.

The proposed CVEF and POE would be visible from the eastern end of Otay Mesa Road where it terminates at Alta Road. The views from this area would be similar to those discussed in the evaluation of Key View 1, except the viewer would be slightly farther from the proposed features. The proposed project would have a moderately high impact on the visual environment of Key View 1; the impact from the eastern end of Otay Mesa Road would be moderately high. Refer to Key View 9, Figure 3.9-15.

CVEF and Border Entry at New POE (Key View 10). The existing site of the proposed CVEF and POE currently consists of undeveloped land east of Otay Mesa, with very few viewers. Refer to Key View 10, Figure 3.9-15. The proposed CVEF and POE would be viewed by many more people when completed, however, and would be the first thing visible upon entering the U.S. from Mexico at the proposed crossing. Although the detailed design of the new POE and CVEF is currently being developed as part of the PDS being prepared by GSA, the conceptual design indicates that elements of the CVEF and POE would not be wholly harmonious or coherent. The diverse elements generally would be geometric, rectilinear and rigid, gray or neutral toned with few naturally colored accents, and would have smooth or manufactured surfaces, as opposed to softened with natural materials or plants. The combination of these elements would create a complex, often dissonant visual environment with few dominant features. The diverse elements would have moderately low intactness and visual integrity due to the low unity and coherence. Vividness of the facility would vary depending on a viewer's experience, although the visual elements of the site would not create distinct visual patterns. The visual experience is not expected to be highly memorable beyond a somewhat overall "chaotic nature," resulting from cars positioning in lines and staff moving between them. Overall, the visual quality of the CVEF and POE would be low.

The mountains to the east would be visible between buildings and facilities, but their dominance and vividness would be lessened. The change to the visual character and quality of the CVEF and POE site would be high. Currently there are few viewers present, however, and most are not focused on the existing view. The resulting impact to the visual environment of the CVEF and POE site would be moderately high.

*Additional Aesthetic Features*

Toll Road Facilities. Proposed SR-11 would include automatic toll verification equipment and a toll administration building and parking lot at the northeastern corner of the POE site, near the Siempre Viva Road Interchange. The toll verification equipment would be placed on overhead structures constructed of large steel columns and approximately the same height as roadway overcrossing structures (refer to Figure 2-13 in Chapter 2.0). The toll administration building and parking lot would be visually similar to (and not highly distinguishable from) the POE facilities. Depending on the placement of the automatic toll verification structures, they may be visible from the surrounding area, particularly where proposed SR-11 would be at the same elevation as or higher than the surrounding area; e.g., at the eastern or western ends of the proposed alignment. Although they would be narrow, their height may draw attention to the roadway. They would be visually associated with the roadway, however, and would contribute only incrementally to the level of post-project visual change to the surrounding area. The resulting visual impact would be moderately low.

Detention Basins. The project detention basins would be rectilinear or curvilinear areas graded to a lower elevation than the proposed roadway and surrounding grades. Basin slopes would be of a uniform 2:1 steepness. Because the basins would be lower than the surrounding grades, they generally would not be visible from surrounding areas, such as Alta Road (see Key View 1, Figure 3.9-8), Airway Road (see Key View 4, Figure 3.9-11 and Key View 7, Figure 3.9-14), or Otay Mesa Road (see Key View 9, Figure 3.9-15). The basins may be visible, however, from proposed SR-11. Motorists and passengers on the new roadway would see basin slopes and, from some points, may see the bottom of the basins. These views of the basins would be peripheral to travelers' main line of sight. The basins would not blend with the generally undeveloped grasslands abutting the project, however, because although the basins would be hydroseeded with ground cover and shrubs for erosion control, they would retain uniform slopes. The resulting visual impact would be moderate.

*TSM/TDM Measures Incorporated into Build Alternatives*

The proposed variations regarding TSM/TDM features common to all build alternatives may include visible facilities such as ramp metering and auxiliary lanes, as well as installation of cameras, monitoring facilities, and changeable message signs. Generally, these visual elements would be small and would not increase the level of change created by construction of the proposed project. The changeable message signs may be the most visible elements of this variation. The signs generally would be directed at the lanes of proposed SR-11, and while they may be visible at an oblique angle from areas outside the proposed R/W, they would not result in a high level of change. The resulting visual impact would be low.

*Temporary Construction Period Impacts*

The proposed project would be built in one phase over an approximate two- to three-year construction period. During that time, the construction of the proposed project would disrupt the visual character of the project area. Visible indications of construction on the roadways would contrast with existing conditions due to the introduction of new dominant elements, including newly cut or filled slopes, retaining walls, raw soil, stockpiled dirt and rocks and bridge formwork, signs, construction period fencing, construction equipment, and night lighting. Other visual disruptions may include detours and local street closures, with signs, equipment, and other visual indicators. While relatively temporary in nature and ultimately addressed through project design, construction would create a high level of change to the visual environment. The resulting visual impact would be high, but short-term.

<u>One Interchange Alternative</u>

Visual impacts of the One Interchange Alternative would be similar to those discussed for the Two Interchange Alternative. The interchange at Alta Road under the One Interchange Alternative would include two loop-style ramps and two diamond-style ramps; all the ramps would be on the eastern side of the overcrossing structure. This interchange mostly would be visible from Alta Road, as represented by Key View 1. Viewers at Key View 1 would see the overcrossing of Alta Road over SR-11, similar to that shown in Figure 3.9-8, as well as some portion of the ramps to the west of Alta Road. The ramps, like the roadway, generally would be at a lower elevation than the surrounding area, although the intersection of the ramps and Alta Road would at the same elevation at Alta Road. The ramps would not cause a higher level of change to the visual environment of the area than SR-11 without the interchange and ramps at Alta Road discussed above.

The One Interchange Alternative would include a similar retaining wall to the wall proposed for the Two Interchange Alternative near the light industrial areas accessed off of Sanyo Avenue. The One Interchange Alternative would have one less auxiliary lane than the Two Interchange Alternative, and the retaining wall would therefore be 50 feet from the buildings, rather than 38 feet, assuming a 22-foot median. Although farther away, this wall would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue. The viewers in the area would have a moderate response to changes in the area, and the resulting visual impact would be moderately high.

<u>No Interchange Alternative</u>

Visual impacts of the No Interchange Alternative would be similar to those discussed for the Two Interchange Alternative. Under the No Interchange Alternative, no interchanges or associated ramps would be constructed along SR-11. Similar to the other alternatives, SR-11 would have an undercrossing structure at Sanyo Avenue, and overcrossings at Enrico Fermi Drive, Alta Road, and Siempre Viva Road

(at the northeastern corner of the POE). The design of the SR-905/SR-125/SR-11 Interchange, Otay Mesa East POE (including the potential future transit center site), and CVEF site would be the same under this alternative as those described above for the Two Interchange and One Interchange alternatives. The No Interchange Alternative would have impacts similar to those discussed above for the Two Interchange Alternative, with slightly less visual change to views represented by Key View 2.

Similar to the One Interchange Alternative, the No Interchange Alternative with a 22-foot median would include a retaining wall placed 50 feet from the buildings within the light industrial areas accessed off of Sanyo Avenue. The wall would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue. The viewers in the area would have a moderate response to changes in the area, and the resulting visual impact would be moderately high.

**Variations on the Build Alternatives**

No Toll Variation

The No Toll Variation would involve SR-11 operating as a freeway instead of a toll highway. The principal design difference under this variation would be the lack of toll-related structures such as toll administration facilities. This would slightly reduce the visual impact of the proposed SR-11 because the tall, overhead structures would not be included and the toll administration building near the Siempre Viva Road Interchange would not be built. Overall, this variation would have the same or slightly lower visual impacts as the proposed project.

46-foot Median Variation

The 46-foot Median Variation could apply to any alternative. Under the Two Interchange Alternative, the wider roadway would require a retaining wall east of Sanyo Avenue of the same height as would be required for the 22-foot median variation evaluated throughout the discussion above. The wall under the 46-foot Median Variation, however, would be placed in close proximity to the existing building north of the proposed R/W and east of Sanyo Avenue. It would require the relocation of the building's driveway and the tanks at the southeast corner of the building (these are visible in the center of Key View 6, Figure 3.9-13). The proposed retaining wall would be placed adjacent to (approximately 26 feet from) the building entrance. It would be a visually dominant, hard-surface, gray, large-scale element that would have no visual continuity with the surrounding area. It would encroach on the visual environment of the building and surrounding parcel, which would, as a result, have no visual unity or intactness. The wall may be visually memorable and therefore vivid, due to its large scale and placement, but the visual quality of the area would be adversely impacted. The wall would be in the immediate foreground for viewers in the area east of Sanyo Avenue; their awareness attention would be focused on the view of the wall, due to its highly visual placement and scale. The proposed variation on the Two Interchange Alternative would have a high visual impact.

The 46-foot Median Variation applied to the One Interchange and No Interchange Alternative also would require placement of the retaining wall closer to the building than with the proposed 22-foot median; however, these alternatives would require one less lane in each direction along SR-11 between Enrico Fermi Drive and the SR-905/SR-125/SR-11 Interchange. The wall, therefore, would not be placed as close to the existing building as under the same variation for the Two Interchange Alternative. It would be at a location similar to the Two Interchange Alternative with a 22-foot median (approximately 38 feet from the closest building; evaluated above in the Additional Views section) and would have a similar visual impact; i.e., the wall would cause a high level of change to the visual character and quality of the

visual environment of the light industrial parcels near Sanyo Avenue. Viewers in the area would have a moderate response to changes, and the resulting visual impact would be moderately high.

SR-905/SR-125/SR-11 Interchange Variations

The SR-905/SR-125/SR-11 Interchange ramp structures would be added to the previously approved interchange in this location, expanding upon a visual environment that is already planned to include multiple highway lanes and large concrete ramp structures. The interchange is located near the center of the proposed project alignment, within or near the more developed, urban areas of Otay Mesa. The addition of connectors and ramps for either the SR-125 Connector or the SR-905/SR-125/SR-11 Full Interchange variation would have similar visual characteristics as the existing structures, and would not adversely affect the visual quality of the surrounding urban area beyond the impacts already discussed. The proposed and previously approved ramps would be the tallest project features; they would be similar in height or slightly less than the height of the nearby industrial buildings. There are no roads or developed areas directly west of the proposed interchange site. The closest viewers west of the interchange would be on La Media Road or portions of Otay Mesa Road and Airway Road, and would be approximately 1,500 feet or farther away from the interchange (unless traveling on the proposed or approved roadway itself). Viewers would see the interchange structures in eastward-looking views, along with existing industrial buildings on Airway Road, Otay Mesa Road, and (further in the distance) Sanyo Avenue. The ramps and interchange structures would extend above the flat mesa and across views of the mountains (as do the existing buildings), but would not entirely block the mountains or extend higher than the horizon line created by the mountains. This moderate level of change combined with the low numbers of viewers would suggest that the ramp and interchange structures would cause a moderately low level of change to eastward views from west of the interchange.

SR-125 Connector Variation. The addition of ramps would result in visual character similar to the approved structures, and would not additionally affect the visual quality of the surrounding urban area. This variation, therefore, would cause a low level of change, and have a low visual impact.

SR-905/SR-125/SR-11 Full Interchange Variation. The addition of the connectors under the SR-905/ SR-125/SR-11 Full Interchange Variation includes a retaining wall that would be approximately 15 to 26 feet high and 150 feet long at the southeastern corner of the interchange, facing southeast. The wall would be part of the support structure for the westbound SR-905 to eastbound SR-11 connection, which would be elevated. Just west of the wall, the connection would consist of a bridge structure. The wall would be placed east of existing Harvest Road. This portion of Harvest Road would no longer be used after construction of the interchange; therefore there would be no future views to the wall from that road.

The wall would be located approximately 300 feet northwest of an existing power generation plant located between Harvest Road and Sanyo Avenue, and accessed via Sanyo Avenue. There are relatively few viewers at that location, and their attention presumably is focused inward, toward their place of business. Between the sparsely placed trees surrounding the power plant facility, the viewers at that location could see the wall as a portion of the larger interchange.

The wall would be located approximately 1,200 feet, or almost one quarter mile, west of Sanyo Avenue. Viewers on Sanyo Avenue would view the wall peripherally, and as part of the larger interchange and highway that would be introduced into the area (refer to the discussion of Key View 5, above).

The addition of the wall and the connector would not affect the overall visual character of the approved interchange, and would not additionally affect the visual quality of the surrounding area. The wall and

ramps proposed by this variation, therefore, would cause a low level of change, and have a low visual impact.

Siempre Viva Road Full Interchange Variation

This variation would only apply to the Two Interchange Alternative, and would construct a full interchange at SR-11/Siempre Viva Road rather than the half interchange described under the baseline Two Interchange Alternative. The full interchange design would result in an overall wider highway footprint in the area. The number of structures, ramps, areas of pavement, and signage also would increase with the expansion of the highway footprint and the addition of structures to create a full interchange.

Although larger in scale and potentially less visually unified than the proposed baseline half interchange, the addition of loop-style ramps and facilities as proposed in the Siempre Viva Road Full Interchange Variation would have a similar visual character as the half interchange described under the baseline Two Interchange Alternative (refer to Key View 3). The new geometric, diverse and complex features would be large, and the overall view would appear monumental. The new elements, however, would all be visually related to the new highway and would have visual continuity with the highway. Project elements would contrast with the surrounding area; however, the surrounding area would no longer be visible, and the highway and interchange would comprise the entire view. That view would be much less open, and the new view elements would be large and dominant. This would result in a moderately high change to the visual character of the area. The new elements also would change the visual quality, but to a lesser extent because the resulting quality of the view would be comprised entirely of the new highway and interchange elements and the change would be moderately low.

The low number of existing viewers in this area have moderate exposure and sensitivity (refer to Key View 3 for a discussion of existing viewers in the area). The change to visual resources, therefore, as a combination of the change to the visual character and the change to the visual quality, would be moderate. In combination with the moderate viewer response, this moderate change to visual resources would result in a moderate visual impact. The full interchange at Siempre Viva Road, therefore, would be visually similar to the baseline half interchange at this location.

**No Build Alternative**

The No Build Alternative would result in implementation of local access ramps to/from Enrico Fermi Drive through the Sanyo Avenue area as part of the approved SR-905 project, as opposed to the above-described alternatives. Under the No Build Alternative, these local access ramps between SR-905 and Enrico Fermi Drive, including the elevated alignment east of Sanyo Avenue still would be implemented, but the ramps would terminate at Enrico Fermi Drive. The moderately high changes to the visual character of the grassland areas near the eastern end of the built alternatives would not occur. The proposed undercrossing at Sanyo Avenue would be similar to that evaluated in Figures 3.9-12 and 3.9-13, and would have a similar moderate impact. Retaining walls supporting the extension east of Sanyo Avenue would be similar to those discussed above under Additional Views: Light Industrial Areas Accessed via Sanyo Avenue. The walls would cause a moderately high change to the visual environment of the light industrial areas east of Sanyo Avenue. Over time, as the area develops with primarily industrial uses in conformance with the EOMSP, the overall visual effect of the No Build Alternative would not differ substantially from the build alternatives; the area would be built out and would take on an industrial appearance. Although SR-11 would not be built, other local roadways would be constructed to serve the planned industrial uses in the area. An SR-11 alignment and CVEF and POE site may be reserved for longer term implementation, in conformance with the EOMSP.

## 3.9.4 Avoidance, Minimization and/or Mitigation Measures

### Build Alternatives and Design Variations

Project landscaping would generally follow standard Caltrans design guidance, with additional measures as needed to address the specific circumstances of the proposed project. Implementation of the following measures would reduce visual impacts identified as low, moderate, moderately high, or high.

*Highway Planting*

**V-HP-1: SR-11 Landscape Concept Plan.** A landscape concept plan would be developed in consultation with the District 11 Landscape Architect, local community planning groups, City staff, County staff, and the Caltrans Project Development Team. The SR-11 Landscape Concept Plan would incorporate the measures listed below to reduce visual impacts. The Landscape Concept Plan would identify highway planting and non-living (mulches, rock blankets and other materials) landscape features that define the visual environment and articulate the landscape theme for SR-11. This measure would reduce impacts addressed in the discussions of Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, visual effects resulting from the POE, and the retaining wall between the POE and the Siempre Viva Road Interchange. It also would contribute to reducing the visual impact of the Siempre Viva Road Full Interchange Variation.

**V-HP-2:** To reduce impacts discussed in the discussions of Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, visual effects resulting from the POE, and from the Siempre Viva Road Full Interchange Variation, the project would receive drought tolerant, low maintenance landscaping that is compatible with the appearance of the adjacent vegetative community and sustainable horticultural practices. Such landscaping will be compatible with Caltrans standard practices, which specify planting or seeding graded slopes with native species where feasible. All planted areas should receive irrigation. This measure would reduce impacts addressed in Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, and visual effects resulting from the POE, as well as from the Siempre Viva Road Full Interchange Variation.

**V-HP-3:** To reduce visual impacts in areas of the project characterized by ornamental landscaping (including those visible in Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, visual effects resulting from the POE, and impacts resulting from the Siempre Viva Road Full Interchange Variation), roadway landscaping that includes trees, shrubs, and groundcover would be installed.

**V-HP-4:** To reduce impacts in less developed areas within the limits of disturbance (eastern portion), such as those addressed in the discussion of Key View 4 and visual effects resulting from the POE, landscaping with trees and shrubs would be planted and mulch would be spread in planting areas. Areas of native species would include temporary irrigation systems (for at least two growing seasons) to aid in plant establishment and supplement deficient natural precipitation. This measure would reduce impacts addressed in Key View 4 and visual effects resulting from the POE.

*Retaining Walls*

**V-RW-1: Architectural Surface Treatment.** Architectural features, textures and colors would be used to mitigate the appearance of retaining wall surfaces and deter graffiti. Walls would incorporate architectural features such as pilasters and caps to provide shadow lines, provide relief from monolithic appearance, and reduce their apparent scale. The architectural surface treatment would follow a highway-

wide theme as identified in the SR-11 Landscape Concept Plan and utilize/adapt architectural features of the adjacent SR-905 project for continuity. This measure would reduce visual effects resulting from architectural features, such as the retaining wall between the POE and the Siempre Viva Road Interchange and the retaining walls in the Sanyo Avenue area under the proposed alternatives (particularly the 46-foot Median Variation)**V-RW-2: Retaining Wall/Barrier Planting Pocket.** In areas where retaining walls must be placed in close proximity to and above the traveled way, space would be reserved between the wall and the safety barrier to include a six-foot wide planting pocket to reduce the impact of the visible height of the wall. Refer to Figure 3.9-16, *Conceptual Mitigation Measures*, for an example cross-section of a planting pocket between a barrier and retaining wall.

**V-RW-3: Terraced Retaining Walls.** Where site conditions permit, retaining walls over 15 feet in height would be divided into two separate structures sufficiently offset from one another to create a flat landscape planting area between the two. Refer to Figure 3.9-16 for an example cross-section of terraced retaining walls. This measure would reduce visual impacts addressed in the discussion of Key View 3, and those resulting from structures included in the Siempre Viva Road Full Interchange Variation.

**V-RW-4: Mid-Slope Retaining Walls.** Retaining walls would be located at mid-slope wherever possible to provide adequate area for landscape screening between the wall and the highway. See the cross-section in Figure 3.9-17, *Conceptual Mitigation Measures,* for an example of a retaining wall placed mid-slope. This measure would reduce visual impacts addressed in the discussion of Key View 3, and those resulting from structures included in the Siempre Viva Road Full Interchange Variation.

**V-RW-5: Plantable Retaining Walls.** Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall would be used where appropriate. This type of wall would be visually compatible with surrounding terrain and provide room at the base for a landscape screening buffer. Figure 3.9-17 depicts an example plan and elevation of a terrain-contoured retaining wall. This measure would reduce visual impacts addressed in the discussion of Key View 3, and those resulting from structures included in the Siempre Viva Road Full Interchange Variation.

**V-RW-6: Plantable Retaining Walls.** Where Caltrans standard design crib walls may be recommended, MSE walls that utilize a stacking tray design, such as Evergreen walls, would be used if possible to provide a landscaped surface that would blend in with the surrounding landscape and reduce the potential visual impact of crib walls.

*Overcrossing, Undercrossing and/or Bridge Structures*

**V-S-1:** Structure design would be enhanced with architectural features and be consistent with design themes developed and identified in the SR-11 Landscape Concept Plan. Pedestrian lighting, widened sidewalks (five and one half feet to seven feet width), bicycle lanes, and other urban amenities on local street portions of structures would be provided to be consistent with local community values and goals. This measure would reduce visual impacts resulting from structures addressed in the discussion of Key Views 2, 3, and 5, and those visible from Enrico Fermi Drive, as well as the proposed retaining wall between the POE and Siempre Viva Road Interchange, and included in the Siempre Viva Road Full Interchange Variation.

**V-S-2:** To reduce visual impacts of slope paving, such as discussed in relation to Key View 5, slope paving at undercrossings and overcrossings would be enhanced with texture to deter graffiti. Paving texture and color would be consistent with materials used on SR-905.

**V-S-3:** To reduce visual impacts of fences/barriers, such as protective fences/barriers along the sides of proposed SR-11 interchange ramps and elevated crossings, any solid, screening fences used on structures would be carefully coordinated with bridge aesthetics and architectural elements.

*Median Barriers and Edge Barriers*

**V-MB-1:** To preserve desirable views and reduce the visual scale of the highway facility, such as is visible in Key View 6, concrete median barriers, if used, would be Type 60S and Type 736. Barriers would be colored and textured according to an approved SR-11 Landscape Concept Plan.

*Manufactured Slopes/Grading*

**V-G-1:** Slopes would be graded 2:1 or flatter to support highway planting and/or non-living landscape materials such as rock mulches as appropriate. Grading would utilize techniques such as slope rounding, slope sculpting, and variable gradients to approximate the appearance of natural topography. Per Caltrans policy, embankment slopes steeper than 4:1 would require an approved design exception.

*Lighting and Signage*

**V-LS-1:** Lighting and mileage/directional signs would be designed and coordinated comprehensively and as a complete package, either as free-standing elements or in conjunction with over/undercrossing structures and architectural features to create a unified design theme and clear driver information.

**V-LS-2:** Existing highway lighting and signage design themes indentified for SR-905 would be continued along SR-11.

**V-LS-3:** Pedestrian lighting on all overcrossings would be uniform and conform to the SR-11 design theme.

**V-LS-4:** Soffit lighting would be provided on all undercrossings with pedestrian facilities.

Electrical and signal equipment at ramp termini would be placed in visually unobtrusive locations.

*Access Control Fences*

**V-AC-1:** Where possible, access control fencing would be placed in visually unobtrusive locations of interchanges and bridges (e.g., near the edge of the R/W). It would be coated with black vinyl where appropriate.

**V-AC-2:** Retaining walls near R/W boundaries would be placed in such a way that they become access control, and an additional access control fence would not be needed. The “dead” spaces that occur between walls and fences would be avoided if at all possible by combining walls with fences.

*Drainage and Water Quality Facilities*

**V-WQ-1:** Concrete interceptor ditches would not be placed at the toe of slopes adjacent to residential property or pedestrian use areas. Alternatives such as subterranean drainage placed below finish grade or a planted geo-reinforced drainage surface would also be used where possible.

**V-WQ-2:** Concrete drainage devices located in non-landscaped areas would be colored (integral color concrete or by staining) to match the surrounding soil color.

**V-WQ-3:** Soft surface alternatives to concrete ditches and rock slope protection would be used wherever possible.

**V-WQ-4:** Detention basins and bio-swales in landscaped areas would be planted with visually and functionally compatible native or ornamental ground cover as appropriate, and shaped to mimic natural ponds and/or vernal pools in the area, rather than be rectangular or square.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization, or mitigation measures would be required.

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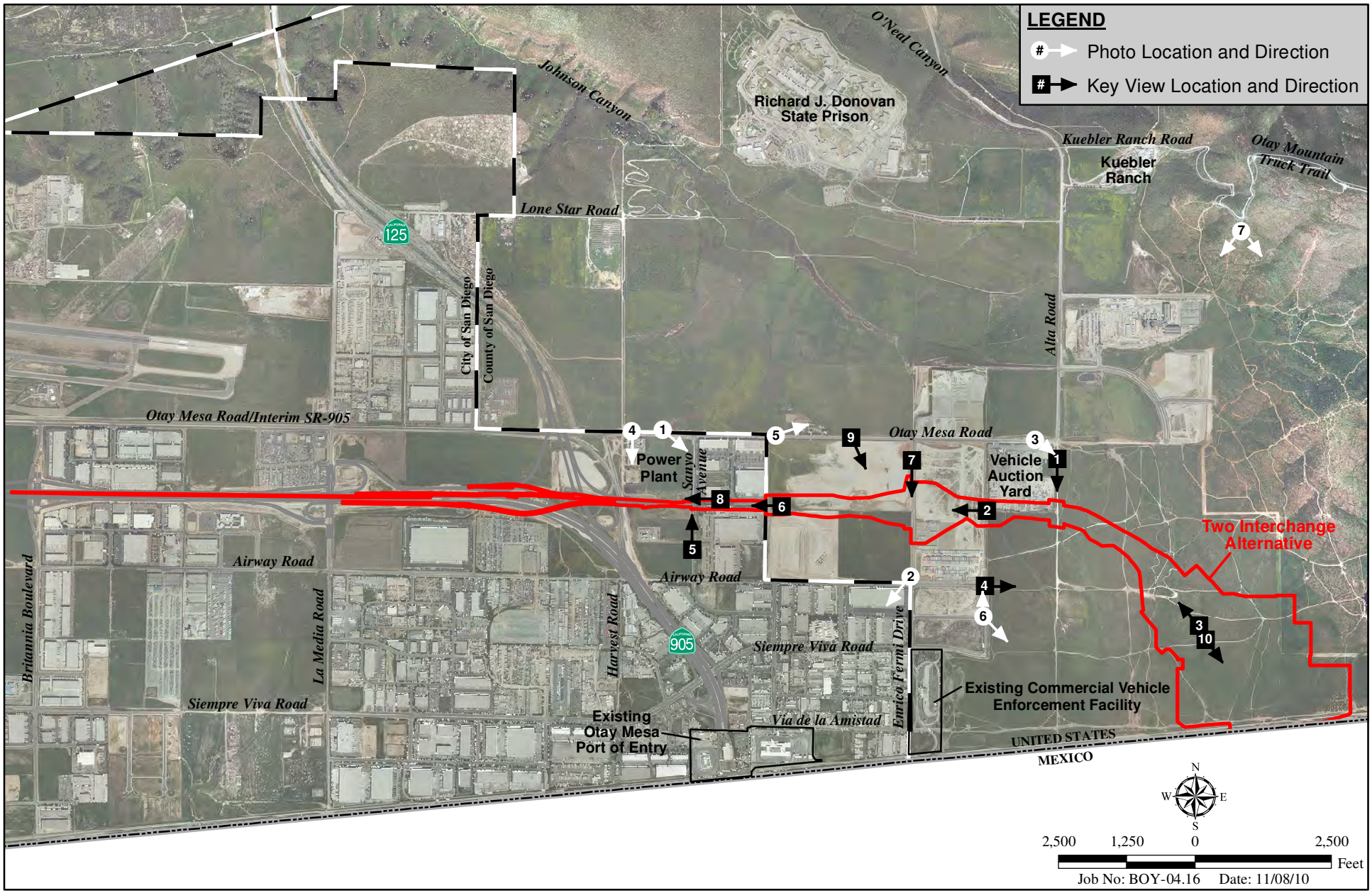


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# Photo and Key View/Simulation Locations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-1

Photograph 1*: View northeast to business park/light industrial development along Sanyo Avenue, north of project site

Photograph 2*: View southwest to business park/light industrial building and undeveloped lot at Enrico Fermi Place and Airway Road, south of project site

*Refer to Figure 3.9-1 for photo location and direction.

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# Site Photographs 1 and 2

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-2

Photograph 3*: View southwest to auto auction yard at Otay Mesa Road and Alta Road, at the northeastern edge of the project study area

Photograph 4*: View southeast to power-generating station at Otay Mesa Road and Harvest Road, abutting the northwestern edge of the project study area

*Refer to Figure 3.9-1 for photo location and direction.

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# Site Photographs 3 and 4

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-3

Photograph 5*: View northeast to residential lot north of Otay Mesa Road, between Sanyo Avenue and Enrico Fermi Drive

*Refer to Figure 3.9-1 for photo location and direction.

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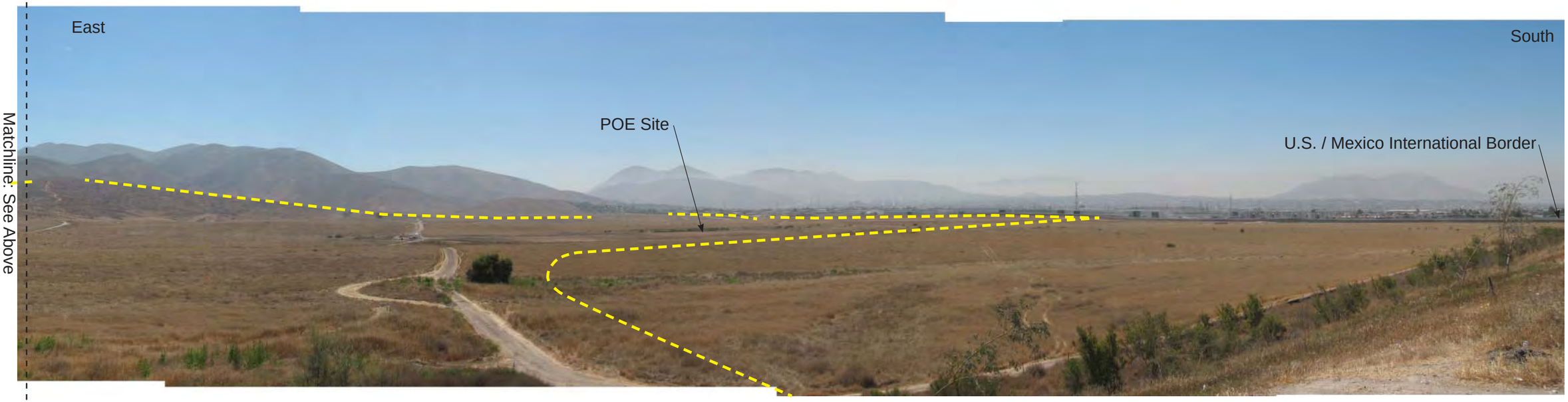
# Site Photograph 5

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-4


Photograph 6a*: Panoramic view north from east end of Airway Road




Photograph 6b*: Panoramic view east and south from east end of Airway Road

*Refer to Figure 3.9-1 for photo location and direction.

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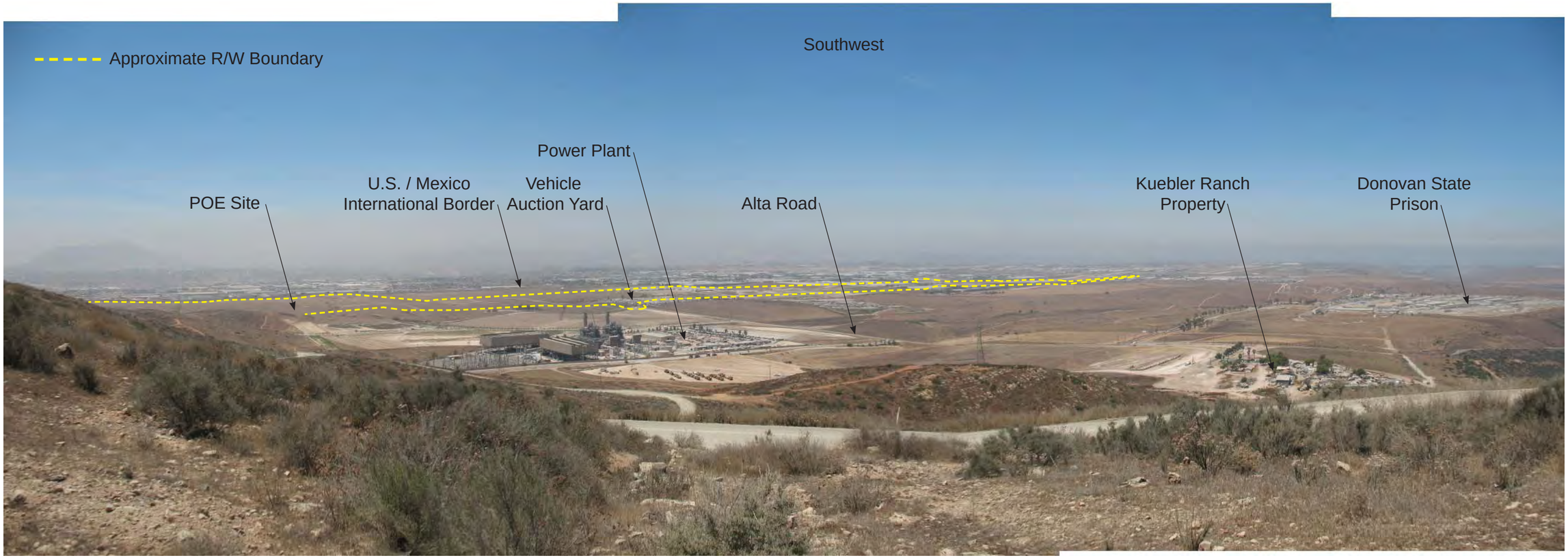
# Site Photographs 6a and 6b

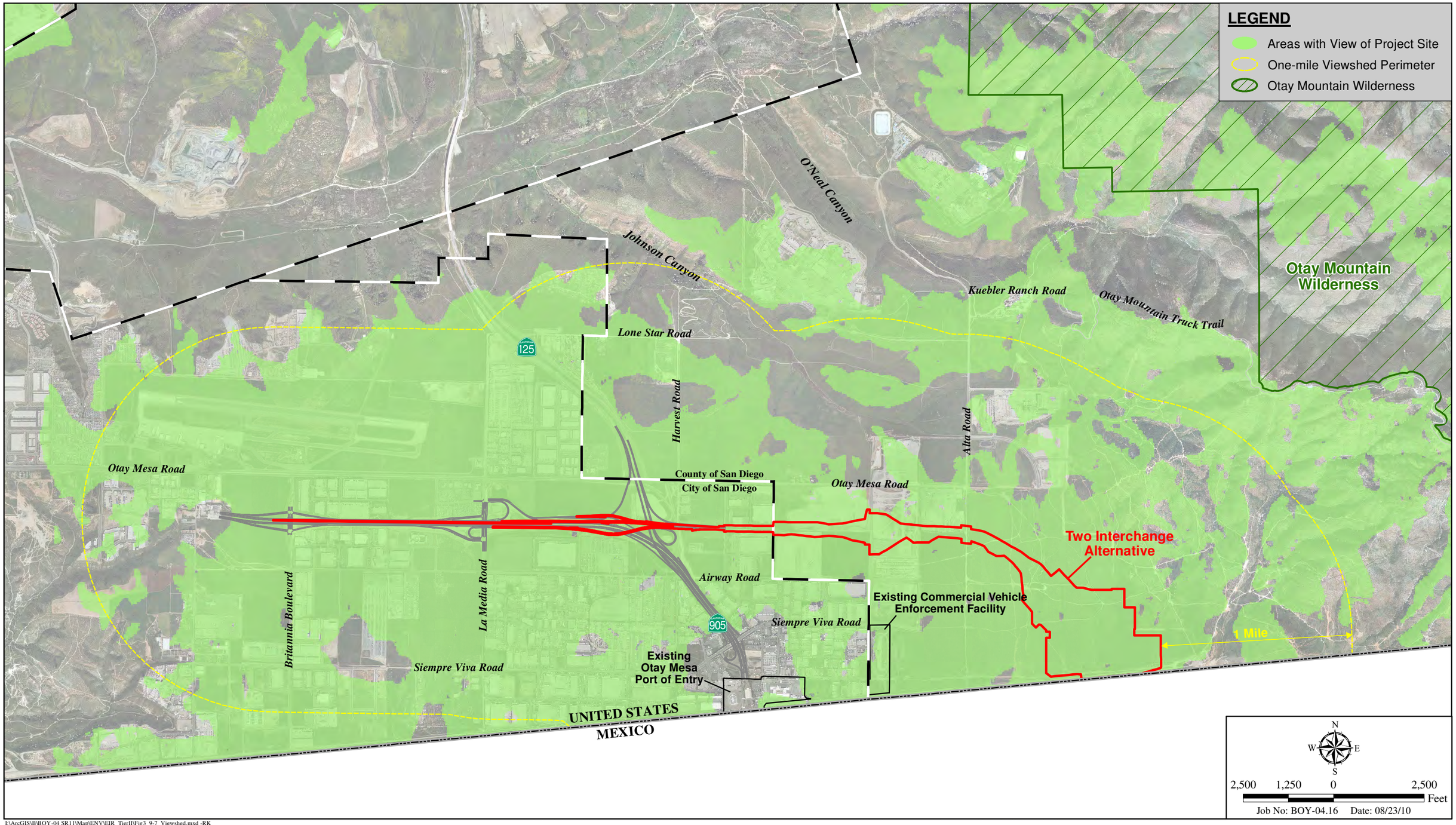
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-5




Photograph 7*: Panoramic view from Otay Mountain Truck Trail

*Refer to Figure 3.9-1 for photo location and direction.

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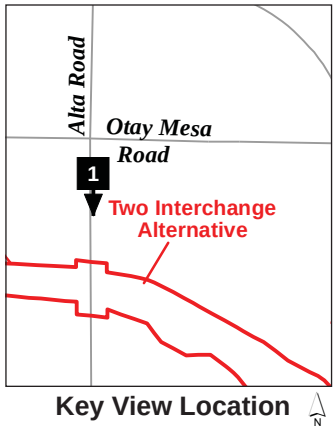
# Viewshed Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 3.9-7

Key View 1:
Existing Conditions




Key View Location


Simulation 1: Southward view to SR-11 from extension of Alta Road

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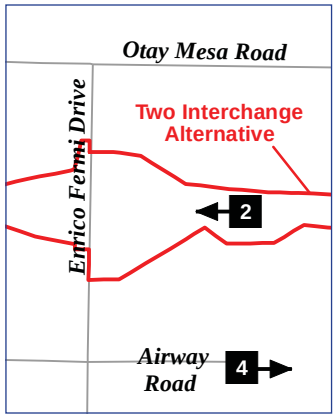
Photo simulations of the structures do not reflect their final design and are for visual example only

# Key View 1/Simulation 1

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-8

Key View 2:
Existing Conditions




Simulation 2: Westward view along proposed alignment, east of Enrico Fermi Drive

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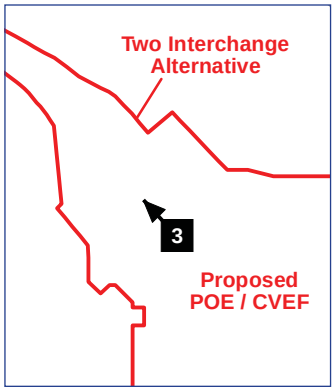
Photo simulations of the structures do not reflect their final design and are for visual example only

# Key View 2/Simulation 2

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-9

Key View 3:
Existing Conditions




Key View Location

Simulation 3: Northwest view toward Siempre Viva Road overcrossing from SR-11/POE transition

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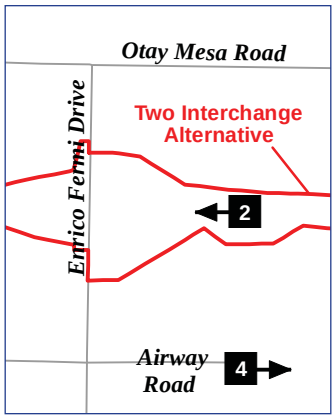
Photo simulations of the structures do not reflect their final design and are for visual example only

# Key View 3/Simulation 3

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-10

Key View 4:
Existing Conditions




Simulation 4: Eastward view toward proposed POE from end of Airway Road

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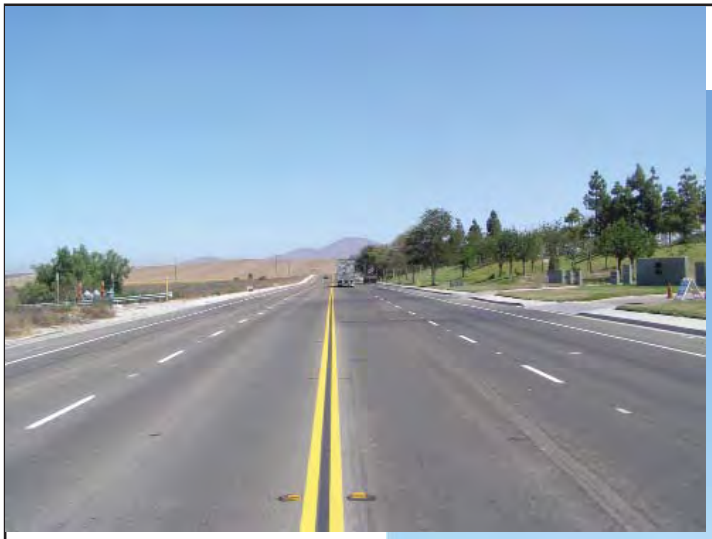
Photo simulations of the structures do not reflect their final design and are for visual example only

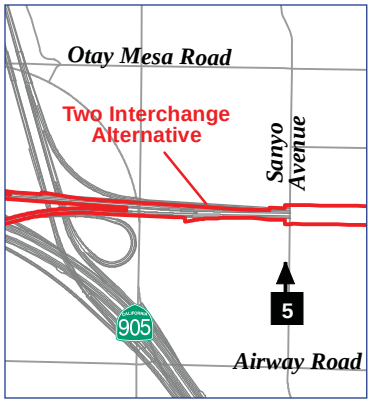
# Key View 4/Simulation 4

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-11



Key View 5:
Existing Conditions




Key View Location

Simulation 5: Northward view toward SR-11 overcrossing from Sanyo Avenue

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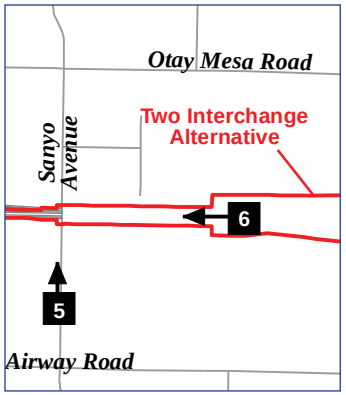
Photo simulations of the structures do not reflect their final design and are for visual example only

# Key View 5/Simulation 5

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-12

Key View 6
Existing Conditions




Key View Location

Simulation 6: Westward view along proposed alignment, east of Sanyo Avenue

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Photo simulations of the structures do not reflect their final design and are for visual example only

# Key View 6/Simulation 6

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-13

Key View 7*: Enrico Fermi Drive
View looking south on Enrico Fermi Drive, between Otay Mesa Road and Airway Road

Key View 8*: Light Industrial Areas Accessed via Sanyo Avenue
View west from buildings east of Sanyo Avenue, adjacent to and north of the proposed alignment

*Refer to Figure 3.9-1 for photo location and direction.

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# Key Views 7 and 8

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-14

Key View 9*: Otay Mesa Road
View south from Otay Mesa Road to new development along Enrcio Fermi Drive

Key View 10*: CVEF and Border Entry at New POE
View south to the area proposed for the Port of Entry

*Refer to Figure 3.9-1 for photo location and direction.

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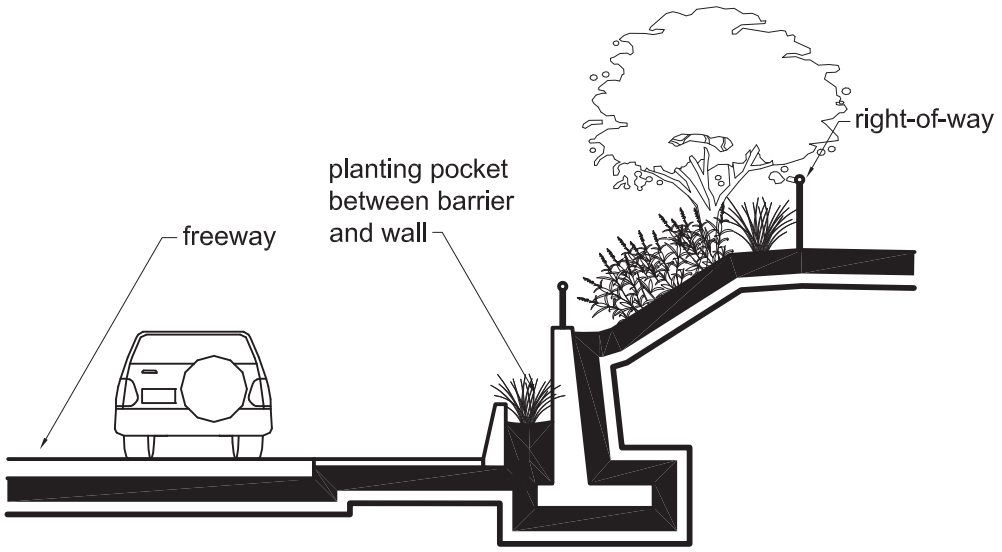
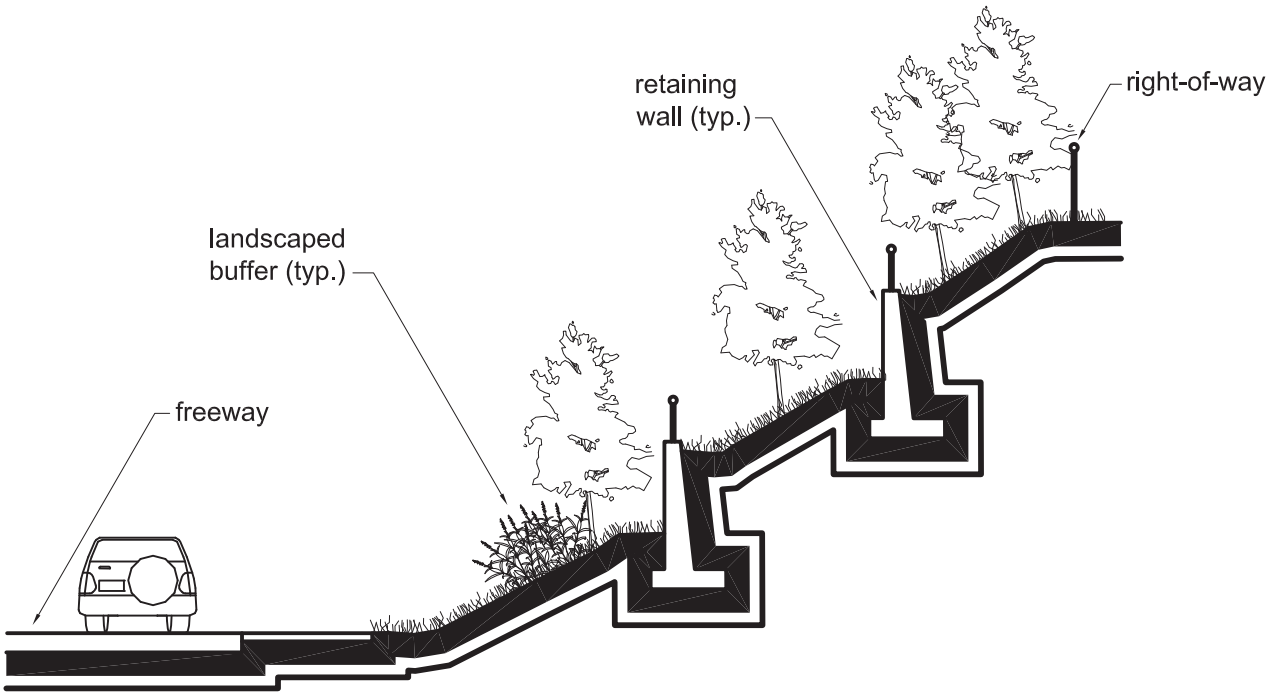
# Key Views 9 and 10

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-15




Cross-section RW-2:
Retaining Wall - Barrier Planting Pocket




Cross-section RW3:
Terraced Retaining Walls

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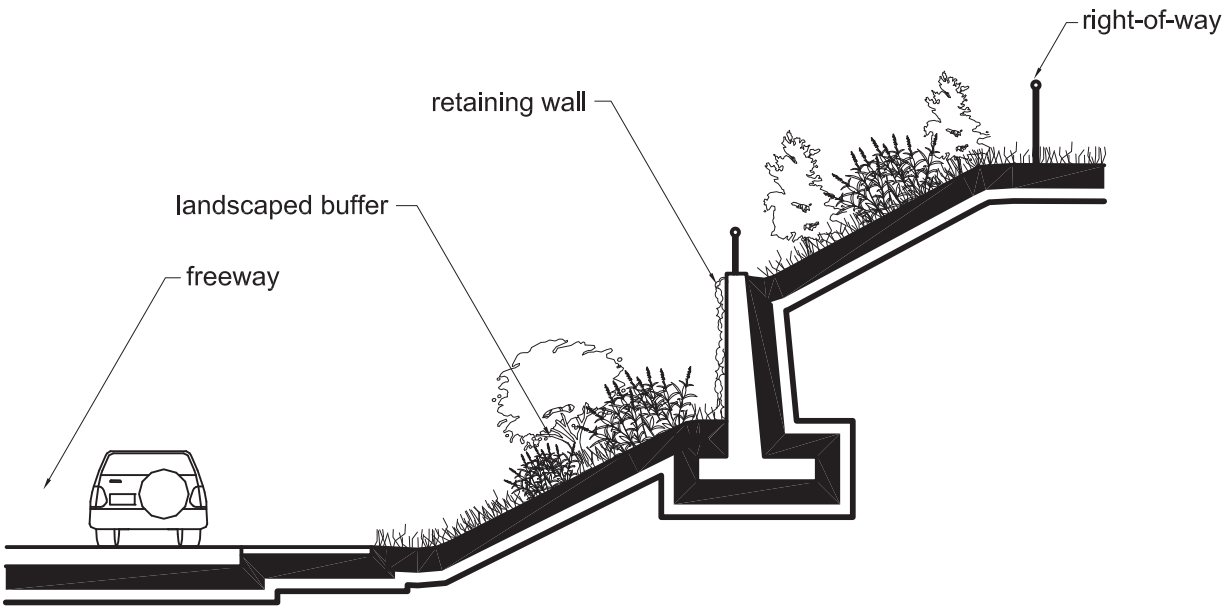
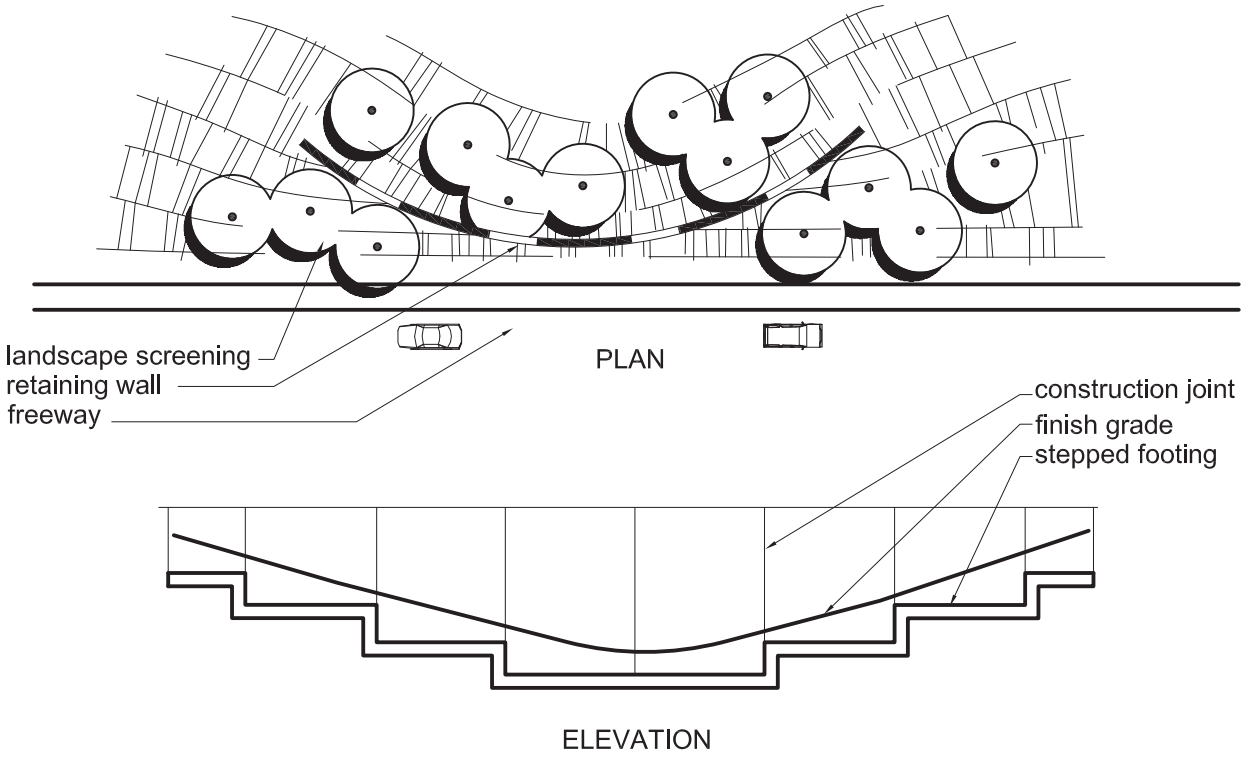
# Conceptual Mitigation Measures

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-16




Cross-section RW4:
Mid-slope Retaining Wall




RW5: Terrain Contoured Retaining Wall

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# Conceptual Mitigation Measures

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.9-17

# 3.10 CULTURAL RESOURCES

## 3.10.1 Regulatory Setting

"Cultural Resources," as used in this document, refer to all historical and archaeological resources, regardless of significance. Both federal and state laws and regulations address cultural resources.

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places (NRHP). Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans.

"Historical Resources" are considered under CEQA Section 21084.1 and CEQA Guidelines Section 15064.5, as well as PRC Section 5024.1, which established the California Register of Historical Resources (CRHR). Public Resources Code Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. "Historical resources" is the CEQA equivalent to NHPA's "historic properties." CEQA Section 21083.2 and CEQA Guidelines 15064.5 also require consideration of unique archaeological resources. Public Resources Code Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

## 3.10.2 Affected Environment

This Tier II Cultural Resources discussion relies in part on studies previously conducted in Otay Mesa. Cultural resources studies prepared for the SR-905 EIS/EIR encompassed the western portion of the project area from Britannia Boulevard to the future extension of Enrico Fermi Drive. The *Cultural Resource Survey and Extended Phase I Test Program for the Future State Route 11 and East Otay Mesa Port of Entry Project* report prepared for the SR-11/Otay Mesa East POE (Kyle Consulting 2001) analyzed potential impacts associated with the Phase I Western SR-11 Corridor and Central SR-11 Corridor from Enrico Fermi Drive east to the U.S. - Mexico border. A subsequent cultural resources survey was conducted to address an expanded project area adjacent to portions of the western Phase I program area boundary. The *First Addendum Archaeological Survey for State Route 11 and the East Otay Mesa Port of Entry* report, dated October 2007, was completed for Phase I of the SR-11/Otay Mesa East POE (Kyle Consulting 2007). Additionally, an Historical Properties Survey Report (HPSR) was completed (Caltrans 2008b). The response by the State Historic Preservation Officer (SHPO), dated April 24, 2008 concurs with Caltrans' findings of No Historic Properties Affected (refer to Appendix I). A similar SHPO letter, dated November 22, 1999, concurs with Caltrans' findings of No Historic Properties Affected regarding the approved SR-905 project. Two supplemental HPSRs for the proposed SR-11/POE project were completed in 2009 and 2010, evaluating additional areas associated with project implementation. These supplemental HPSRs are provided in the cultural resources technical study supporting this EIR/EIS.

The Phase I Area of Potential Effect (APE) consisted of some 700 acres on a relatively level mesa that has historically been used for agriculture. The Tier II APE was established as an area including proposed future R/W for SR-11 and associated improvements to SR-905, Otay Mesa East POE, CVEF, utility relocations, biological mitigation sites, and all proposed easements. The western portion of the Tier II APE (between SR-125 and Britannia Boulevard) is encompassed within the SR-905 R/W that is currently under construction. A segment in the eastern area of the Tier II APE has been developed with an industrial park (east of Sanyo Avenue). The remainder of the APE to the east of this developed area is generally undeveloped, with a series of dirt roads cutting through the area. As the Tier II APE is smaller and generally contained by that of Phase I, most of the area has previously been studied and did not necessitate a second cultural resources study. To incorporate those portions of the Tier II APE that exist outside the previously-covered APE, two supplemental HPSRs have been completed. The first supplemental HPSR (Caltrans 2009b) for Tier II includes the area near the northwest side of the proposed POE site. The second supplemental HPSR addresses the portion of the APE that is within the existing R/W for the SR-125/SR-905 Interchange and SR-905 (Caltrans 2010a). Information from the Phase I reports and the Phase I and supplemental Tier II HPSRs is summarized in this section of the EIR/EIS.

Cultural resources work for the entire project has consisted of background records searches at appropriate archives to determine what sites had been previously recorded within the project study footprint, and what other surveys and excavations had been conducted in the greater Otay Mesa region.

Native American consultation completed for this project included a request to the California Native American Heritage Commission for completion of a record search of its Sacred Lands File for the project area during Phase I. Consultation with local Native American tribes was recommended and a list of Native American contacts was provided. Letters describing the project and a map of the study area were mailed to the contacts and follow-up telephone calls were made. None of the Native American representatives contacted expressed concerns regarding the proposed project. Detailed information regarding consultation with Native American Tribes can be found in the Phase I PEIR/PEIS.

Archaeological resources within the study footprint consist of very sparse, highly disturbed surface scatters of prehistoric lithics, including what archaeologists call flakes, cores, and the shatter that is created when cores are struck by hammerstones to produce flakes. It appears that prehistoric mesa activities centered primarily upon the extraction of good quality material for future stone tool production off the mesa; but extraction also occurred for the expedient manufacture of multi-purpose tools that may have been used once or during one seasonal stay on the mesa and then discarded. These sites have been highly disrupted by dry farming activities on the mesa over the last 150 years that removed, intermixed and spread prehistoric materials away from their original contexts and created new fractured rocks interspersed with prehistoric materials. The resulting disturbance pattern for these sites is that the artifacts are widely scattered over large areas and no longer exhibit any patterning related to how they were originally created and deposited by local Native Americans. The archaeological record observable today is a very poor reflection of what existed prehistorically. Additionally, these mesa-top sites lack suitable materials for radiocarbon dating, or even diagnostic artifacts allowing investigators to place the sites within San Diego County's 10,000-year-old Prehistoric Era. This renders the sites, with few exceptions, being poorly suited for further research (Caltrans 2008b).

After extensive testing of surface scatters in Otay Mesa, an agreement was reached with the SHPO to test only those sites that carried the potential to provide information important in history or prehistory. Sites that did not have the requisite attributes would not be subjected to further investigation beyond their initial recordation. Of the recorded sites in the Phase I APE for SR-11 and the eastern portion of the SR-905 APE that would be affected by the SR-11 project, most were surface scatter sites. Those that underwent additional subsurface testing did not contain subsurface deposits, diagnostic artifacts, or Native American remains or concerns. All sites recorded within the APE were deemed ineligible for listing in

the NRHP or the CRHR. The SHPO concurred with this finding for the SR-11 Phase I APE on April 24, 2008 and for the SR-905 project (including the areas that would be affected by the SR-11 project) on November 22, 1999 (see Appendix I). A second supplemental HPSR for the SR-11 project was processed to confirm this finding (Caltrans 2010a).

The supplemental APE discussed in the first supplemental HPSR encompasses portions of two Otay Mesa scatter sites. Both sites were previously determined to be ineligible for listing in the NRHP or CRHR as an outcome of the Section 106 processing for the Tier I environmental document. Accordingly, a finding of No Historic Properties Affected has been determined.

During construction, buried artifacts have been encountered associated with P-37-015988, which represents the former grounds of the St. John's Lutheran Church and cemetery. The church formally closed during the Great Depression, and the building was subsequently torn down in 1940 and reused to build other structures on Otay Mesa. In 1970, the burials from the church cemetery were relocated to Glen Abbey Memorial Park in Bonita and reinterred. The coffins were left in the ground. During early grading for SR-905 one empty coffin was found. The remaining coffin locations have been surveyed and mapped, and monitoring will take place once construction at the SR-905 and Britannia Blvd. interchange is begun. The SHPO concurred in 1999 that this site was not eligible for inclusion on the National Register. As noted above, the SR-11 improvements between SR-125 and Britannia Boulevard would all occur within the existing SR-905 R/W. This area is currently undergoing substantial construction and disturbance, and the addition of lanes to accommodate the SR-11 project would not encounter additional buried resources. Accordingly, the second supplemental HPSR finds that there would be no effect to cultural resources from these additional improvements to SR-905.

As detailed in Appendix D, *Resources Evaluated Relative to the Requirements of Section 4(f),* no Section 4(f) resources exist in the project vicinity. No impacts to Section 4(f) cultural resources would occur.

### 3.10.3 Environmental Consequences

**Build Alternatives and Variations**

The following analysis of potential cultural resources impacts is applicable to all three build alternatives (Two Interchange, One Interchange, and No Interchange) with or without the associated variations. All of the potential alternatives and variations would affect similar areas, with the type and nature of associated impacts therefore the same. While the precise areas affected could vary slightly among the various alternatives and variations, the level of impact and associated requirements to address these potential effects would be the same.

Based on the extent of the project APE, the proposed SR-11 and POE/CVEF project areas could potentially disturb nine recorded archaeological sites, which are composed of very sparse lithic scatters.

Because the sparse lithic scatters and P-37-015988 are not considered historic properties for the purposes of NHPA, nor historical resources or unique archaeological resources for the purposes of CEQA, no direct or indirect impacts to important cultural resources would occur as a result of implementation of the proposed project build alternatives or variations. Subsurface testing at those sites that might have further research potential did not reveal the presence of cultural resources beneath the ground surface. Furthermore, because of the geological history of this area, which includes ancient soils that have formed in place from underlying bedrock, pre-dating by millions of years any human presence on Otay Mesa, unanticipated discoveries during construction are not likely.

The proposed project build alternatives and variations would not use Section 4(f) resources.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to cultural resources would result.

## 3.10.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

Unanticipated subsurface discoveries during construction are not likely. Relocation of known human remains from the historic church property at P-37-015988 has occurred. During hundreds of archaeological investigations on Otay Mesa over the last 50 years, no unanticipated human remains have been discovered. As mentioned above, the geologic history of the mesa is completely unsuitable for the presence of accumulated soil deposits. In such a context the presence of buried cultural resources within soils that are tens of millions of years old is not possible. Furthermore, it is unlikely that the SR-11 project would uncover historic resources within the existing SR-905 R/W that would not have been found during the current SR-905 construction. The following actions to avoid, minimize or mitigate impacts to any unknown resources that might be encountered during construction serve as precautionary measures:

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the District Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

# PHYSICAL ENVIRONMENT

## 3.11 HYDROLOGY AND FLOODPLAIN

### 3.11.1 Regulatory Setting

#### International Boundary and Water Commission

The IBWC is a bi-national organization that oversees projects along the U.S. - Mexico Border with the potential to generate impacts involving political, economic, environmental or infrastructure issues. The IBWC jurisdiction extends 60 feet north from the international border, with the principal mission of the agency to provide solutions for issues related to the application of U.S.-Mexico treaties, including hydrology and flood control. Portions of the proposed POE facilities extend into the IBWC jurisdictional area and are subject to associated regulatory oversight. While none of the proposed SR-11 and CVEF facilities are located within the noted 60-foot zone, treated and detained runoff from the project area would be discharged into watersheds that eventually enter IBWC jurisdiction. The IBWC guidelines identify a number of hydrologic and hydraulic requirements for projects within or potentially affecting their jurisdiction, including assessment of applicable soil characteristics (e.g., infiltration rates), drainage conditions, flow regulation, and drainage facility maintenance. Additional detail on IBWC requirements is provided in the project Hydrology and Hydraulic reports referenced below in Section 3.11.2.

#### Executive Order 11988

EO 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Requirements for compliance are outlined in 23 CFR 650 Subpart A. In order to comply with these requirements, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

#### Caltrans Standards

Caltrans standards related to hydrology and floodplain issues include applicable sections of the HDM (Caltrans 2007a). These guidelines identify a number of criteria related to hydrologic and floodplain issues, including topics such as roadway drainage, storm frequency/magnitude, design discharge, cross drainage, and storm drain/facility design.

### 3.11.2 Affected Environment

A Hydrology & Hydraulics Report was prepared as part of the Tier II engineering and environmental evaluation of the SR-11 and CVEF design alternatives, with a separate study prepared for the POE site

(AECOM 2010a and 2010b). Both of these analyses incorporate applicable information from the Preliminary Existing Condition Hydrology Calculations Report prepared during the Phase I project evaluation (Boyle 2007). The Phase I report analyzed existing hydrologic conditions in the SR-11 corridor, with associated data used for applicable calculations in the current Tier II reports (e.g., peak discharge rates and related culvert sizing). In addition, a Hydrogeologic Site Assessment was prepared for the project to assess subsurface and groundwater conditions in the eastern portion of the study area (i.e., approximately east of Alta Road, Caltrans 2009c). The results of the noted investigations are summarized below along with other applicable data.

The study area identified for project-related hydrologic issues (hydrology study area) encompasses approximately 1,624 acres, and includes the three build alternatives and associated variations, as well as applicable watersheds (Figure 3.11-1, *Project Area Drainage Map*). Specifically, this includes portions of the project area where proposed development would result in the construction of new impervious surfaces or other activities potentially generating hydrologic or hydraulic effects. Based on these criteria, the hydrology study area includes the following specific locations: (1) the entire POE project site and related watersheds; (2) the three SR-11 alternative corridors and related variations east of the SR-905/SR-125/SR-11 Interchange, along with associated watershed areas; (3) proposed ramp additions/modifications and related watershed areas associated with the SR-905/SR-125/SR-11 Interchange; and (4) the proposed lane widening along SR-905 that extends approximately 0.7 mile west of the SR-905/SR-125/SR-11 Interchange. The hydrology study area does not include the proposed SR-905 median modifications extending approximately between the SR-905/SR-125/SR-11 Interchange and Britannia Boulevard, as this median was already proposed to be completely paved (and was previously addressed as part of the SR-905 analysis). Accordingly, the proposed design modifications to this facility would not result in any associated hydrologic or hydraulic effects.

A Location Hydraulic Study (LHS) was not prepared for the Tier II project, based on a determination during the Phase I evaluation that all proposed facilities would be located outside of mapped floodplain boundaries. This conclusion is also applicable to the identified Tier II hydrology study area, with the SR-11/CVEF corridor and POE site located within areas designated as Zone X by the Federal Emergency Management Agency (FEMA). Zone X includes areas determined to be outside the mapped 500- and 100-year floodplain boundaries, as described below under Floodplain Characteristics (refer also to Appendix J of this EIR/EIS).

**Watershed and Drainage Characteristics**

The hydrology study area is within the Tijuana Hydrologic Unit (HU), one of 11 major drainage areas designated in the 1994 Regional Water Quality Control Board (RWQCB) Water Quality Control Plan for the San Diego Basin (Basin Plan; 1994, including amendments through April 2007). The Tijuana HU is a triangular-shaped area of approximately 470 square miles, and extends generally from the Laguna Mountains and Campo on the east to Imperial Beach on the west. The Tijuana HU is divided into a number of hydrologic areas (HAs) and subareas (HSAs) based on local drainage characteristics, with the hydrology study area located in the Water Tanks HSA of the Tijuana Valley HA (Figure 3.11-2, *Project Location within Local Hydrologic Designations*). The Water Tanks HSA includes approximately 9,580 acres and encompasses the hydrology study area and all associated watersheds north of the international border. The Tijuana River is the principal surface water feature in the Tijuana HU, with a number of smaller tributary drainages also present. Specifically, the Water Tanks HSA in the hydrology study area and vicinity is drained primarily by a number of small to moderate size swales and canyons flowing south and/or west. Average annual precipitation varies from approximately 10 inches at the western end of the study area to 14 inches in the easternmost areas, with the majority of this rainfall (approximately 85 percent) occurring during the period of December through March (AECOM 2010a; weather.com 2009).

Surface drainage within the hydrology study area occurs as concentrated (confined) flow in several unnamed swales and canyon drainages, and as unconfined (sheet) flow. Drainage from the this study area and associated watersheds moves generally south and/or west over level to undulating terrain on Otay Mesa (along with steeper areas in the easternmost areas), before eventually crossing the international border with Mexico. General drainage patterns within the study area and vicinity are depicted on Figure 3.11-1. Detailed descriptions of on- and off-site flow patterns and directions are provided in the project Hydrology and Hydraulics reports (AECOM 2010a and 2010b). Flows south of the border continue generally south and potentially enter the Tijuana River, although the status of surface water diversions/withdrawals in Mexico is unknown. Flows in the river continue generally west for approximately 8 to 10 miles before reaching the Pacific Ocean via the Tijuana Estuary. The westernmost approximately 5-mile stretch of the Tijuana River is located on the U.S. side of the border, entering the U.S near the community of San Ysidro.

Much of the eastern and central portions of the hydrology study area are undeveloped, and encompass native habitats along with areas previously disturbed by activities such as agriculture and grading (refer to Figure 3.11-1). Existing development in the eastern and central areas includes portions of a power plant site, a vehicle auction yard, several truck parking/freight storage sites, other commercial/industrial uses, and a number of paved/unpaved roads. The western portion of the hydrology study area (approximately west of Sanyo Avenue) includes more extensive disturbed and/or developed sites, with specific facilities including two small power plants; numerous commercial and industrial properties; portions of existing/developing SR-905, and the proposed SR-905/SR-125/SR-11 Interchange; and other paved roadways. Existing drainage facilities within the study area encompass storm drain systems related to local development, as well as a number of culverts extending under the international border fence.

**Floodplain Characteristics**

The hydrology study area has been mapped for flood hazards by FEMA, and as previously indicated, is designated as Zone X, or areas determined to be outside the 500- and 100-year floodplains (FEMA 2002 and 1997a through 1997c). The closest mapped 100-year floodplain is located approximately one-half mile north along Johnson Canyon Creek. A letter from the San Diego County Department of Public Works (DPW) was received by Caltrans during the Phase I analysis to document the noted floodplain conditions, with this letter concluding that the project did "[n]ot require a Floodplain Impact assessment." (County 2007b; refer to Appendix J). The Tier II project area is similar to the noted Phase I site and is located outside of mapped floodplain boundaries, with the referenced conclusions regarding floodplain analysis therefore still applicable. The DPW letter also includes information regarding flood control standards for local development projects, essentially requiring that development sites within the East Otay Mesa area provide local or regional detention basins to regulate off-site discharge. These requirements are addressed below in Section 3.11.3 under the discussion of “Runoff”.

**Groundwater**

No regional groundwater basins are mapped within the hydrology study area and immediate vicinity. The closest major aquifers include the Otay Valley and Lower Tijuana River basins, located approximately 1.5 miles north and 3 miles west, respectively, at their closest points (California Department of Water Resources [DWR] 2003, SDCWA 1997). Historical data from these sources identify groundwater depths of between approximately 350 and 485 feet in several locations west of the study area (DWR 1986). Six borings were drilled to depths of between 26.5 and 130 feet in the eastern portion of the study area (east of Alta Road) as part of the project Hydrogeologic Site Assessment (Caltrans 2009c). No groundwater was encountered in these borings, with the referenced report concluding that “[i]t is very unlikely that significant groundwater exists in the Otay Formation…” and “No groundwater was logged within the Santiago Peak Volcanic bedrock, to the maximum extent of…exploratory borings.” As described in

Section 3.13, *Geology/Soils/Seismic/Topography*, the Otay Formation is mapped in much of the eastern hydrology study area (likely underlying the entire area at depth), and is underlain by the Santiago Peak Volcanics. Based on the above information, permanent shallow groundwater is generally not expected to occur in this area.

## 3.11.3 Environmental Consequences

### Build Alternatives and Variations

The following analysis of potential hydrologic and floodplain impacts is applicable to all three build alternatives, with or without the associated variations. Specifically, all of the potential alternatives and variations encompass similar facility types and locations, as well as similar hydrologic and floodplain conditions. Accordingly, while the specific locations and extent of project hydrology and floodplain impacts would vary slightly among the build alternatives and variations, the overall type and nature of these impacts would be essentially the same. For conditions where specific differences among the alternatives may affect hydrology and floodplain considerations, the differences are called out as appropriate.

Watershed and Drainage

*Drainage Patterns and Directions*

The proposed design under all three project alternatives and associated variations would include constructing a number of new storm drain facilities and/or extending existing/proposed structures where applicable. As a result, project-related storm flows would be accommodated within the proposed project storm drain system, and associated overall drainage patterns and directions would not change. Specifically, runoff within the hydrology study area, including on-site flows generated within the project alignment and off-site flows routed through the project alignment via proposed cross drains (culverts), would continue to drain generally to the south and west as previously described.

*Runoff*

SR-11 Corridor/CVEF Drainage Facilities. On-site flows within the SR-11 corridor would be conveyed via a series of inlets, pipes, channels/ditches and basins. Preliminary basin locations are shown on Figures 2-9a through 2-9d, 2-11a through 2-11d, and 2-12a through 2-12d. Final drainage facilities will be determined during the project design phase, and will be based on the feasibility and reasonability of meeting regulatory standards (including local agency standards). The preliminary basin sizes identified in the associated technical report (AECOM 2010a) are based on the assumption that all associated regulatory criteria can be met.

The proposed basins would be capable of providing detention, retention/infiltration, and/or water quality treatment capacity, and would encompass one or both of the following features to address associated requirements (depending on final design): (1) subsurface soil treatments (i.e., to facilitate infiltration); and (2) paved bottoms to facilitate maintenance. Additional discussion of SR-11 hydrology and hydraulics is provided in the SR-11/CVEF Hydrology/Hydraulics Study (AECOM 2010a), with water quality applications discussed in Section 3.12 of this EIR/EIS, *Water Quality and Storm Water Runoff*.

Drainage within the proposed CVEF site would be collected and conveyed via a system of facilities including inlets, pipes, channels/ditches, and basins. Runoff from locations such as rooftops and paved parking areas would be directed to one or more proposed basins wherever feasible, with these basins providing flow regulation pursuant to applicable criteria. Final drainage facilities will be determined during the project design phase, and will be based on the feasibility and reasonability of meeting regulatory criteria, as noted for SR-11. The preliminary basins identified in the Hydrology and

Hydraulics Report are based on the assumption that all associated regulatory criteria can be met, and are sized to provide detention, retention/infiltration and/or water quality treatment capacity. All basins would incorporate some or all of the design features identified above for the SR-11 corridor. Additional discussion of the on-site CVEF drainage system design is provided in the SR-11/CVEF Hydrology/Hydraulics study (AECOM 2010a).

Preliminary drainage facility design for the SR-11 corridor/CVEF in the eastern portion of the hydrology study area is based on Caltrans methodologies and the HDM (Caltrans 2007a), and incorporates City and County of San Diego storm water management policies for the Otay Mesa area where feasible and reasonable. Detention basins would regulate post-development flows such that discharge from the hydrology study area would be equal to or less than existing flows, and may also provide water quality treatment (refer to Section 3.12). All proposed facilities associated with on-site drainage would be designed to accommodate 25-year storm event[1] flow rates, pursuant to Caltrans guidelines. In addition, all applicable project-related drainage outlets would include energy dissipation structures to reduce post-development flow velocities pursuant to Caltrans guidelines.

Off-site flows associated with the portion of the SR-11 corridor east of Sanyo Avenue and the CVEF site would be conveyed through (beneath) the roadway facilities via cross drains, with these flows to be kept separate from the described on-site drainage system where feasible. Five cross drain structures are proposed within the SR-11 corridor/CVEF, as summarized in Table 3.11-1. All proposed cross drains would be designed to accommodate a 100-year storm event, and would include appropriate energy dissipation structures pursuant to Caltrans guidelines. Drainage easements are proposed at the upstream end of the cross drain structures to accommodate associated potential ponding beyond the edge of the R/W.

**Table 3.11-1**
**PROPOSED CROSS DRAIN FACILITIES IN THE EASTERN PORTION OF THE STUDY AREA**

| Location[1] | Length (feet) | Design Parameters |
|---|---|---|
| 69+00 | 226 to 272[2] | 24-inch Circular RCP |
| 95+50 to 95+90[3] | 195 to 571[4] | 36-inch Circular RCP |
| 110+00 | 326 | 48-inch Circular RCP |
| 128+00 | 1,150 | 4-by 8-foot Double Box[5] |
| CVEF | 694 | 4-by 6-foot Double Box[6] |

[1] Station Number locations are depicted on Figures 2-9a through 2-9d, 2-11a through 2-11d, and 2-12a through 2-12d.
[2] Proposed lengths would be 226 feet for the No Interchange and One Interchange alternatives, and 272 feet for the Two Interchange Alternative.
[3] The cross drain location would be at Station 95+90 for the No Interchange and Two Interchange alternatives, and at Station 95+50 for the One Interchange Alternative.
[4] Proposed lengths would be 195 feet for the No Interchange Alternative, 571 feet for the One Interchange Alternative, and 292 feet for the Two Interchange Alternative.
[5] This facility would encompass two adjacent 4-foot by 8-foot box culverts.
[6] This facility would encompass two adjacent 4-foot by 6-foot box culverts.
RCP = reinforced concrete pipe
Source: AECOM (2010a)

[1] A 25-year storm is defined as an event with a four percent chance of occurring in any given year, while a 100-year storm is an event with a one percent chance of occurring in any given year.

Drainage easements would also be provided at the downstream ends of the cross drains if determined necessary during the project design phase. Additional discussion of off-site hydrology/hydraulics is provided in the preliminary SR-11/CVEF Hydrology/Hydraulics Study (AECOM 2010a), as well as the Existing Conditions Hydrology Report prepared for the Phase I project PEIR/PEIS (Boyle 2007).

Flows within the portion of the SR-11 corridor located west of Sanyo Avenue would be conveyed into a series of inlets, outlets, pipes, basins and culverts similar in nature to those described above for the proposed SR-11 corridor in the eastern portion of the hydrology study area. Specifically, all on-site drainage facilities in the western portion of this study area would be designed to accommodate a 25-year storm event, while off-site facilities would be designed to accommodate a 100-year storm event (per Caltrans standards). The proposed basins would provide flow regulation such that post-project discharge would be equal to or less than existing discharge, and may also provide water quality treatment (refer to Section 3.12). Based on the relatively limited extent of proposed facilities in the western portion of the study area, it is anticipated that modifications to the previously approved SR-905 drainage systems (if required) would generally be minor in nature, and that all associated facilities would be located within the existing SR-905 R/W.

POE Drainage Facilities. GSA is currently preparing a PDS to provide design information for the proposed Otay Mesa East POE. For purposes of this EIR/EIS, a conceptual POE development plan has been prepared by AECOM (2009a), based on a related GSA feasibility study. After completion of the noted PDS, the Tier II EIR/EIS conclusions will be reevaluated to determine if additional environmental analysis is necessary. The following description is based on the referenced POE conceptual development plan, with drainage design based on Caltrans standards and methodologies.

Drainage within the proposed POE site would be collected and conveyed via a system of facilities including inlets, pipes, channels/ditches, and culverts. In addition, runoff from locations such as rooftops and paved parking areas would be directed to one or more proposed basins wherever feasible, with these basins providing flow regulation pursuant to applicable criteria. All drainage from the POE site would ultimately discharge to the south within the adjacent federal land that is protected by the U.S. Border Patrol, with the associated outlets to include appropriately sized energy dissipation structures to reduce flow velocities (in conformance with applicable requirements). Conceptual drainage facilities associated with the POE site are depicted on Figure 2-15 of this EIR/EIS.

Floodplain

As outlined above in Section 3.11.2, no project-related encroachment into mapped 100-year floodplains would occur under any of the build alternatives and associated variations. Accordingly, no impacts related to floodplain encroachment would result from project implementation.

Groundwater

None of the identified build alternatives and variations would involve the extraction of groundwater for purposes such as consumption or irrigation, and no associated impacts would result from project implementation. The project would entail the construction of impervious surfaces that would slightly reduce local infiltration/recharge capacity, although this reduction would be minor in nature due to the relatively small area involved (i.e., approximately two percent of the 9,580-acre Water Tanks HSA), as well as the fact that permanent shallow groundwater is generally absent in the project vicinity (as described in Section 3.11.2). Perched groundwater requiring extraction and disposal to accommodate project construction could potentially be encountered under any of the build alternatives. Related dewatering operations would not adversely affect groundwater reservoirs, however, based on the following considerations: (1) construction-related dewatering, if required, would be minor and short-term

in nature, and would therefore not result in adverse effects such as aquifer drawdown; and (2) any extracted groundwater would likely be treated (if required) and discharged on site, and would therefore contribute to local aquifer recharge (i.e., through on-site infiltration). Construction dewatering, if required, would also be subject to applicable NPDES and Caltrans requirements related to water quality concerns, as described in Section 3.12.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and associated hydrology and floodplain impacts would result.

## 3.11.4 Avoidance, Minimization, and/or Mitigation Measures

**Build Alternatives and Variations**

Based on the discussions provided above in Section 3.11.3, implementation of any of the three build alternatives, with or without the potential variations, would potentially result in a number of hydrology and hydraulic impacts. Per the discussion of floodplains in 3.11.3, no associated impacts would result from project implementation under any of the build alternatives. A number of avoidance and minimization measures related to hydrologic and hydraulic issues have been identified for all three build alternatives, including the use of appropriate drainage facilities such as inlets, pipes, channels/ditches, basins and cross drains. Final drainage facilities will be determined during the project design phase, as part of detailed hydrology/hydraulic reports to be prepared based on final project design. Specifically, such analyses encompass appropriate design, sizing, and location of proposed storm drain facilities, as well as continued consultation with applicable federal, state, and local agencies regarding issues including watershed development, storm drain design/capacity, and regulatory conformance. Implementation of the applicable conclusions and recommendations/requirements identified in the detailed project hydrology/hydraulic reports would avoid or effectively minimize all potential impacts related to hydrology and floodplain issues.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

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**LEGEND**

- Hydrology Study Area
- Principal Drainage Locations/Directions
- 40-foot Contours

LONESTAR ROAD
HARVEST ROAD
OTAY MESA ROAD
ALTA ROAD
SR-905 (UNDER CONSTRUCTION)
SANTO AVENUE
AIRWAY ROAD
BRITANNIA BOULEVARD
LA MEDIA ROAD
SIEMPRE VIVA ROAD
ENRICO FERMI DRIVE
VIA DE LA AMISTAD
KERNS STREET
UNITED STATES
MEXICO
Hydrology Study Area

N W E S

2,000 1,000 0 2,000 Feet

Job No: BOY-04.16 Date: 08/18/10

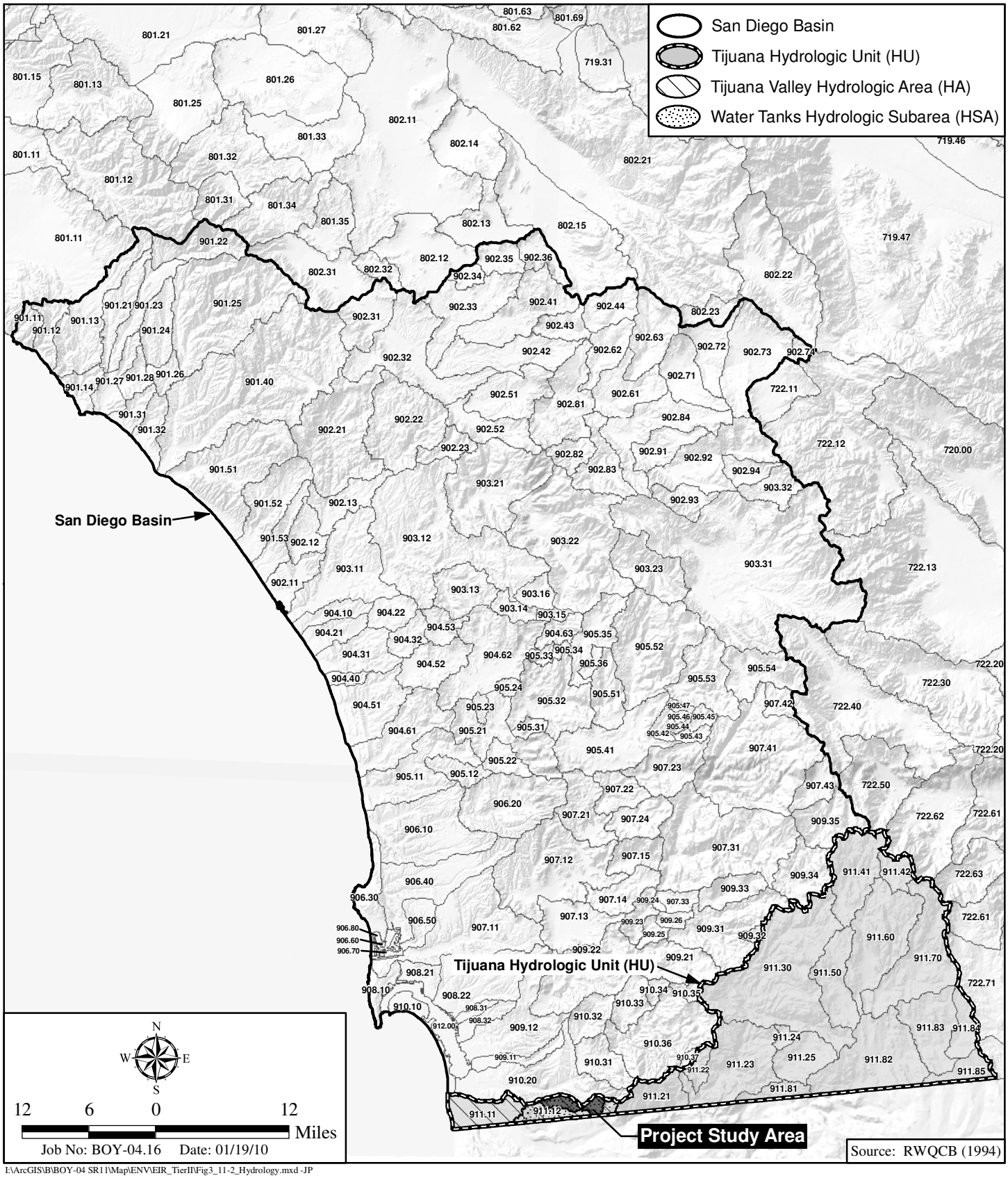
Source: AECOM (2010a and 2010b)

I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_11-1_Hydrology_Floodplain.mxd -JP

# Project Area Drainage Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.11-1




I:\ArcGIS\B\BOY-04 SR11\Map\ENV\EIR_TierII\Fig3_11-2_Hydrology.mxd -JP

# Project Location within Local Hydrologic Designations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.11-2

# 3.12 WATER QUALITY AND STORM WATER RUNOFF

## 3.12.1 Regulatory Setting

The project is subject to a number of regulatory requirements related to water quality, as outlined below. These guidelines are intended to prevent or reduce adverse effects related to water quality through efforts such as preventing or minimizing the generation of sediment- and other contaminant-laden runoff, as well as treating runoff to remove sediment and other contaminants prior to off-site discharge.

### International Boundary and Water Commission

The IBWC (as described in Section 3.11. Hydrology and Floodplain) is a bi-national organization that oversees projects along the U.S. - Mexico Border with the potential to generate impacts related to issues including environmental concerns. With respect to water quality, the IBWC guidelines identify requirements including "[t]he prevention of pollution; and meeting applicable environmental laws, regulations and other pertinent requirements." For the proposed project, this would entail designing the storm drain system to ensure that there is no net increase in post-development flows from the project site, as well as conforming with appropriate elements of the federal Clean Water Act (CWA) and related requirements as outlined below.

### Federal Requirements: Clean Water Act

In 1972, the Federal Water Pollution Control Act was amended, making the discharge of pollutants to the waters of the U.S. from any point source unlawful, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Federal Water Pollution Control Act was subsequently amended in 1977, and was renamed the CWA. The CWA, as amended in 1987, directed that storm water discharges are point source discharges. The 1987 CWA amendment established a framework for regulating municipal and industrial storm water discharges under the NDPES program. Important CWA sections are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for any federal project that proposes an activity, which may result in a discharge to waters of the U.S. to obtain certification from the State that the discharge will comply with other provisions of the act.

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) into waters of the United States. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) addresses storm water and non-storm water discharges.

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

**State Requirements: Porter-Cologne Water Quality Control Act (California Water Code)**

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives) required by the CWA, and regulating discharges to ensure that the objectives are met. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. States designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are state listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source controls, the CWA requires establishing Total Maximum Daily Loads (TMDLs). TMDLs establish allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

**State Water Resources Control Board and Regional Water Quality Control Boards**

The SWRCB administers water rights, water pollution control, and water quality functions throughout the state. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

NPDES Program

The SWRCB adopted the Caltrans Statewide NPDES Permit (Order No. 99-06-DWQ) on July 15, 1999. This permit covers all Caltrans rights-of-way, properties, facilities, and activities in the State. NPDES permits establish a five-year permitting time frame. NPDES permit requirements remain active until a new permit has been adopted.

In compliance with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed Project would be programmed to follow the guidelines and procedures outlined in the 2003 SWMP to address storm water runoff or any subsequent SWMP version draft and approved.

Municipal Separate Storm Sewer System Program

The USEPA defines a Municipal Separate Storm Sewer System (MS4) as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, country, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water. As part of the NPDES program, USEPA initiated a program requiring that entities having MS4s apply to their local RWQCBs for storm water discharge permits. The program proceeded through two phases. Under Phase I, the program initiated permit requirements for designated municipalities with populations of 100,000 or greater. Phase II expanded the program to municipalities with populations less than 100,000.

Construction Activity Permitting

Section H.2, Construction Program Management, of the Caltrans' NPDES permit states: "The Construction Management Program shall be in compliance with requirements of the NPDES General Permit for Construction Activities (Construction General Permit)." Construction General Permit (Order No. 2009-009-DWQ, adopted on September 2, 2009), became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a disturbed soil area (DSA) of one acre or greater, and/or are part of a common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the Construction General Permit.

The newly adopted permit separates projects into Risk Levels 1 – 3. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring. Risk levels are determined during the design phase and are based on potential erosion and transport to receiving waters. Applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP).

The Caltrans Statewide NPDES Permit requires Caltrans to submit a Notice of Construction (NOC) to the RWCB to obtain coverage under the Construction General Permit. Upon project completion, a Notice of Completion of Construction (NOCC) is required to suspend coverage. This process will continue to apply to Caltrans projects until a new Caltrans Statewide NPDES Permit is adopted by the SWRCB. An NOC or equivalent form will be submitted to the RWQCB at least 30 days prior to construction if the associated DSA is one acre or more. In accordance with Caltrans' Standard Specifications, a Water Pollution Control Plan (WPCP) is used for projects with DSA of less than one acre.

During the construction phase, compliance with the permit and Caltrans' Standard Special Conditions requires appropriate selection and deployment of both structural and non-structural BMPs. These BMPs must achieve performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.

## 3.12.2 Affected Environment

A Water Quality Report dated August 2010 was prepared for the proposed project, including the three SR-11 alignment alternatives (and associated variations), the POE and the CVEF site (AECOM 2010c). The results of this study are summarized below along with other applicable data. The following analysis is based on the identified study area for water quality and storm water runoff issues (study area), which includes the project R/W and/or disturbance limits as depicted on Figure 1-2.

### Drainage and Topographic Characteristics

As described in Section 3.11, the study area is located within the Tijuana Valley HA and the Water Tanks HSA, both of which are subdivisions of the Tijuana HU (refer to Figure 3.11-2). Surface drainage within the study area occurs as both concentrated (confined) flow in existing storm drains and natural drainage courses, and as unconfined (sheet) flow in areas such as vegetated slopes, graded sites, and streets. Drainage within the study area flows generally to the south and west, with all associated flows ultimately discharging to the Tijuana River and potentially reaching the Tijuana Estuary and adjacent Pacific Ocean shoreline.

Topography in the study area consists of gently undulating hills and mesas, with on-site elevations ranging from approximately 640 feet above mean sea level (MSL) along the northeastern boundary of the study area, to 490 feet above MSL near the southern boundary of the POE site.

**Soils and Erosion Potentials**

Native soils within the three build alternative corridors are associated primarily with the Diablo, Huerhuero, Salinas and Stockpen soil series, as mapped by the SCS (1973). Specifically, the POE and the easternmost portion of the SR-11 corridor (approximately east of Siempre Viva Road) encompass Huerhuero Soils, while the SR-11 alignment between Siempre Viva Road and Sanyo Avenue includes mostly Diablo Soils. West of Sanyo Avenue, mapped soils are mainly associated with the Salinas and Stockpen Soil Series, although most of this area has been previously graded and/or developed (e.g., in association with SR-905), with native topsoils likely mixed with and/or replaced by engineered fill.

Identified erosion potential for the on-site Huerhuero Soils (Huerhuero Loam, 2 to 9, 5 to 9, and 9 to 15 percent slopes) is given as slight to moderate, based on generally shallow slopes and relatively high clay content. Similarly, identified erosion potential for Diablo Soils (Diablo Clay 2 to 9 percent slopes, and 9 to 15 percent slopes) is listed as slight to moderate (SCS 1973). Erosion potential is identified as slight for both the on-site Salinas (Salinas Clay Loam, 0 to 2 percent slopes) and Stockpen soils (Stockpen Gravelly Clay Loam, 2 to 5 percent slopes). Due to the fact that most or all of the Salinas and Stockpen soils have been altered or replaced as noted, however, the erosion potential in areas west of Sanyo Avenue (as well as other previously graded/developed sites) is likely moderate in association with sandy fill deposits.

**Groundwater**

Based on the discussions provided in Section 3.11 and the project Water Quality Report, groundwater was not encountered during subsurface hydrogeologic investigations extending to depths of between 26.5 and 130 feet in the eastern portion of the study area (east of Alta Road), and no significant groundwater is anticipated to occur within the underlying Otay Formation. Percolation testing revealed that the percolation rates at the Project site are generally low, corresponding with the clayey (bentonite) and silty composition of the surficial soils and the dense, underlying sedimentary formation.

**Beneficial Uses**

The San Diego Basin Plan (RWQCB 1994) establishes beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are defined in the Basin Plan as "the uses of water necessary for the survival or well being of man, plus plants and wildlife." Water quality objectives are identified as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." Existing and potential beneficial uses identified in the Basin Plan for applicable inland surface and coastal waters within and downstream of the study area are summarized below (with definitions of individual beneficial uses provided in Section 4.2 of the project Water Quality Report, AECOM 2010c). While all of the waters listed below are potential receiving waters for the project (with some uncertainty regarding surface water diversions/withdrawals in Mexico), direct discharge from the study area would be limited to a number of unnamed intermittent streams (refer to Figure 3.11-1 of this EIR/EIS, and Figure 11 of the Water Quality Report). Other downstream receiving waters would not receive direct discharge from the project due to the intervening distances at their closest points, including the Tijuana River (approximately two miles to the south) and the Tijuana Estuary/Pacific Ocean (approximately eight miles to the west).

- Unnamed Intermittent Streams (Hydrologic Unit 911.12; Water Tanks HSA). Identified existing beneficial uses include agricultural supply (AGR), non-contact recreation (REC-2), warm freshwater habitat (WARM), and wildlife habitat (WILD), with potential beneficial uses including industrial service supply (IND) and contact recreation (REC-1).

- Tijuana River (Hydrologic Unit 911.11; San Ysidro HSA). Identified existing beneficial uses include REC-2; preservation of biological habitats of special significance (BIOL); WARM; WILD; and rare, threatened and endangered species (RARE). Potential beneficial uses include IND and REC-1.

- Tijuana River Estuary (Hydrologic Unit 911.11; San Ysidro HSA). Identified existing beneficial uses include REC-1; REC-2; commercial and sport fishing (COMM); BIOL; estuarine habitat (EST); WILD; RARE; marine habitat (MAR); migration of aquatic organisms (MIGR); spawning, reproduction and/or early development (SPWN), and shellfish harvesting (SHELL). No potential beneficial uses are listed for the Tijuana River Estuary.

- Pacific Ocean. Identified existing beneficial uses include IND, navigation (NAV), REC-1, REC-2, COMM, BIOL, WILD, RARE, MAR, aquaculture (AQUA), MIGR, SPWN, and SHELL. No potential beneficial uses are listed for the Pacific Ocean.

No existing beneficial uses are identified for groundwater in the Water Tanks HSA, with listed potential beneficial uses including municipal and domestic supply (MUN), AGR and IND.

Water quality objectives include both narrative requirements (which can encompass qualitative and quantitative standards) and specific numeric objectives for identified constituents. Basin Plan beneficial uses and water quality objectives are used (along with other data) to identify Section 303(d) impaired waters and related contaminant restrictions as outlined below.

**303(d) Impaired Water Bodies and Total Maximum Daily Loads**

The RWQCBs produce bi-annual qualitative assessments of statewide water quality conditions. These assessments are focused on CWA Section 303(d) impaired water listings and scheduling for assignment of total maximum daily load (TMDL) requirements. States are required to identify and document any and all polluted surface water bodies, with the resulting documentation referred to as the *Clean Water Act Section 303(d) List of Water Quality Limited Segments*, or more commonly the 303(d) list. This list of water bodies identifies the associated pollutants and TMDLs, along with pollutant sources and projected TMDL implementation schedules. A TMDL establishes the maximum amount of an impairing substance or stressor that a water body can assimilate and still meet water quality standards, and allocates that load among pollution contributors. TMDLs are quantitative tools for implementing the state's water quality standards, based on the relationship between pollution sources and water quality conditions.

The 303(d) list is the primary vehicle for protecting water quality in impaired waters bodies and for protecting beneficial uses. The most current (2006) approved 303(d) list identifies downstream receiving waters including the Tijuana River, Tijuana River Estuary, and Pacific Ocean shoreline, as summarized in Table 3.12-1. While TMDLs are not currently established for potential receiving waters associated with the study area, target dates for establishing local TMDLs are established and listed in Table 3.12-1.

**Table 3.12-1**
**RECEIVING WATER BODIES 303(d) LIST SUMMARY**

| Water Body Name | Pollutant/Stressor[1] | Estimated Size Affected | Proposed TMDL Completion Date |
|---|---|---|---|
| Tijuana River | Eutrophic Conditions | 6 miles | 2019 |
| | Indicator Bacteria | 6 miles | 2010 |
| | Low Dissolved Oxygen | 6 miles | 2019 |
| | Pesticides | 6 miles | 2019 |
| | Solids | 6 miles | 2019 |
| | Synthetic Organics | 6 miles | 2019 |
| | Trace Elements | 6 miles | 2019 |
| | Trash | 6 miles | 2019 |
| Tijuana River Estuary | Eutrophic Conditions | 1,319 acres | 2019 |
| | Indicator Bacteria | 1,319 acres | 2010 |
| | Lead | 1,319 acres | 2019 |
| | Low Dissolved Oxygen | 1,319 acres | 2019 |
| | Nickel | 1,319 acres | 2019 |
| | Pesticides | 1,319 acres | 2019 |
| | Thalium | 1,319 acres | 2019 |
| | Trash | 1,319 acres | 2019 |
| | Turbidity | 1,319 acres | 2019 |
| Pacific Ocean Shoreline (Tijuana HU) | Indicator Bacteria | 3 miles[2] | 2010 |

[1] Identified potential sources for all listed pollutants/stressors associated with the Tijuana River and Pacific Ocean shoreline are limited to point/non-point sources. Identified potential sources for listed pollutants/stressors associated with the Tijuana River Estuary are limited to point/non-point sources, except for low dissolved oxygen (urban runoff and storm sewers in addition to point/non-point sources), and turbidity (source unknown).

[2] The affected three miles of the Pacific Ocean shoreline extends north from the international border with Mexico.

Source: SWRCB (2007).

### Caltrans Target Design Constituents

As part of its own runoff characterization studies, Caltrans identifies pollutants with loads or concentrations that commonly exceed allowable standards, but that are considered treatable with Caltrans-approved BMPs. These pollutants are referred to as Targeted Design Constituents (TDCs), and include sediment, metals (total and dissolved copper, lead, and zinc), nitrogen, phosphorus, and general metals.

Project-related runoff would flow into a number of unnamed intermittent drainages after leaving the project storm drain/water quality treatment system, although it would not directly enter water quality sensitive areas (refer to Section 3.11 of the EIR/EIS, as well as Section 6.0 and Figures 11 and 13 in the Water Quality Report). Project flows would ultimately enter the Tijuana River, and could potentially reach the Tijuana River Estuary and adjacent Pacific Ocean shoreline. While none of the noted intermittent streams in the project vicinity are identified as 303(d) listed waters, the Tijuana River, Tijuana River Estuary, and adjacent Pacific Ocean shoreline are listed for a number of pollutants as shown on Table 3.12-1, including several pollutants identified as TDCs (AECOM 2010c).

**Surface Water Quality**

Surface water within the study area consists predominantly of intermittent flows from storm events and (to a lesser extent) landscape irrigation. Storm flows are subject to variations in water quality due to local conditions such as runoff volume/velocity and land use. The Tijuana River watershed is classified as a Category I (impaired) watershed by the SWRCB due to a variety of water quality problems, including non-point agricultural sources on the U.S. side of the border and numerous point and non-point sources on the Mexican side (AECOM 2010c). The Tijuana River Estuary, a National Estuarine Sanctuary that supports a variety of threatened and endangered plants and animals, is threatened by inflows from the Tijuana River containing high concentrations of coliform bacteria, sediment, trace metals (copper, lead, zinc, chromium, nickel, and cadmium), PCBs, and other urban, agricultural, and industrial pollutants. The Tijuana River Watershed Urban Runoff Management Program (WURMP), conducted pursuant to applicable NPDES requirements, identifies high priority water quality problems within the Tijuana River HA, including the following pollutants/conditions in areas within and downstream of the study area: bacteria/pathogens, sediment (total suspended solids/turbidity), pesticides (diazinon), gross pollutants, total metals, and organics (AECOM 2010c).

Caltrans has conducted runoff monitoring from various transportation facilities throughout California. The objectives of this monitoring include ensuring compliance with NPDES permit requirements, producing scientifically credible runoff data from various Caltrans facilities, and providing information to assist in developing effective storm water management strategies. The results of the monitoring indicated that results could be significantly influenced by various factors such as:

- Traffic Volumes. Pollutant concentrations in storm water runoff increase with higher traffic volumes.

- Cumulative Seasonal Precipitation (CSP). As CSP increases, pollutant concentration decreases, indicating that pollutants wash off during the early wet season and tend to decrease thereafter.

- Antecedent Dry Periods. As the duration of the dry period increases, there is a corresponding increase in pollutant concentrations contained in the subsequent runoff.

- Total Event Rainfall. As total event rainfall increases, pollutant concentration decreases due to dilution from larger storms. Pollutant concentrations tend to be highest in the initial portion of the runoff, and to become more diluted as the storm continues.

- Maximum Rainfall Intensity. Rainfall intensity has a similar effect as noted for total event rainfall, because maximum rainfall intensity provides the highest runoff volume and correspondingly decreases pollutant concentrations.

- Drainage Areas. In larger drainage areas, a number of individual pollutant concentrations tended to be lower for highway-related runoff.

- Impervious Fraction of the Drainage Area. This factor did not have a consistent effect on pollutant concentrations. That is, while higher impervious areas tended to increase the concentration of some pollutants and decrease others, it was the weakest effect of all the factors evaluated.

### Groundwater Quality

No known groundwater quality data are available for the study area or immediate vicinity, with the occurrence of permanent shallow groundwater generally not anticipated locally. Specifically, six borings were drilled to depths of between 26.5 and 130 feet in the eastern portion of the study area (east of Alta Road) as part of the project Hydrogeologic Site Assessment (Caltrans 2009c), with no groundwater encountered (refer to Section 3.11 for additional discussion of local groundwater potential).

## 3.12.3 Environmental Consequences

### Build Alternatives and Variations

The following analysis of potential water quality and storm water runoff impacts is applicable to all three build alternatives, with or without the associated variations. This conclusion is based on the fact that all of the potential alternatives and variations encompass similar facility types and locations, as well as similar water quality and storm water runoff conditions. Accordingly, while the specific locations and extent of associated water quality and storm water runoff impacts would vary somewhat among the build alternatives and variations, the overall type, nature and level of these impacts would be essentially the same under all potential alternative/variation scenarios. For conditions where specific differences among the alternatives may potentially affect water quality and storm water runoff considerations (e.g., proposed disturbance areas), the differences are called out as appropriate.

Potential water quality impacts from the project are associated with both short-term construction activities and long-term operation and maintenance of the proposed facilities. Both short- and long-term water quality impacts could potentially affect the identified downstream 303(d) receiving waters, including applicable portions of the Tijuana River, Tijuana River Estuary and Pacific Ocean shoreline.

Short-term Construction Impacts

Potential water quality impacts related to project construction include erosion/sedimentation; the on-site use and storage of construction-related hazardous materials (e.g., fuels, etc.); the potential occurrence and removal/disposal of materials containing lead-based paint, asbestos or treated wood; and disposal of extracted groundwater (if required), as described below.

*Erosion and Sedimentation*

Implementation of the Two Interchange, One Interchange and No Interchange alternatives would result in approximately 371, 370 and 352 acres of DSA, respectively, from grading and construction. All of these DSA acreages would increase somewhat under the potential variations, although as previously noted the overall type, nature and level of the associated impacts would not change substantially. Specifically, DSA increases identified for project variations in the Water Quality Technical Report range from approximately 0.5 acre for the 46-foot Median Variation, to 23 acres for the Siempre Viva Full Interchange Variation of the Two Interchange Alternative (AECOM 2010c). Detailed descriptions and quantifications of DSA acreages associated with all the potential variation scenarios are provided in Section 5.0 (Table 5.2) of the project Water Quality Report (AECOM 2010c). If appropriate BMPs are not incorporated effectively, project construction activities could potentially result in related erosion and off-site sediment transport (sedimentation) from efforts such as removal of surface-stabilizing features (e.g., vegetation removal during clearing and grubbing), excavation of existing compacted materials from cut areas, and redeposition of excavated (and/or imported) material as fill in proposed development sites. Project-related erosion could potentially result in the influx of sediment into downstream receiving waters

(including 303[d] listed waters as previously described), with associated water quality effects such as turbidity and the transport of other contaminants that tend to adhere to sediment particles.

The project DSAs would be subject to potential short-term erosion and sedimentation impacts as noted above, particularly between the beginning of grading/construction and the installation of pavement/structures and establishment of permanent cover in landscaped areas. Potential construction-related water quality impacts would be addressed through conformance with the Caltrans NPDES Permit and the NPDES Construction General Permit. Avoidance and/or minimization measures to ensure conformance with NPDES permit requirements related to erosion and sedimentation are summarized in Section 3.12.4.

*Construction-related Hazardous Materials*

Project construction under any of the build alternatives/variations would involve the on-site use, storage and/or generation of potentially hazardous materials such as vehicle fluids (oil, grease and petroleum), asphaltic emulsions, joint and curing compounds, solvents and thinners, paints, sandblasting materials, treated lumber, concrete debris, trash, base and sub-base materials, and portable septic system wastes. Without adequate controls, the accidental discharge of such materials during project construction could potentially result in water quality impacts if they reach downstream receiving waters. Potential impacts from construction-related hazardous materials are of particular concern for impaired segments of these receiving waters (refer to Table 3.12-1), as well as for materials such as petroleum compounds that can be toxic to aquatic species in low concentrations. Proposed construction-related BMPs associated with hazardous material control are summarized in Section 3.12.4.

*Lead-based Paint, Asbestos, and Treated Wood*

The project Initial Site Assessments (ISAs) conclude that lead-based paint, asbestos-containing materials, and treated wood (e.g., with creosote) may be present in association with existing freeway (or other) structures in the study area (Ninyo & Moore 2009, 2007b). Discharge of these contaminants (if present) in site runoff during project demolition/construction could potentially affect the quality of downstream receiving waters, including impaired waters as previously described. Implementation of any of the project build alternatives/variations would include conformance with recommendations from the project ISAs, as well as applicable regulatory and technical standards. Specifically, field investigation/sampling would be conducted to verify the ISA observations and conclusions, and appropriate remediation measures would be implemented (if required) pursuant to applicable regulatory requirements (refer to Section 3.15 for additional information).

*Disposal of Extracted Groundwater*

While permanent shallow groundwater is generally not expected to occur within the study area, project-related excavation and construction activities could potentially encounter perched aquifers requiring groundwater extraction and disposal (e.g., to facilitate equipment access and excavation). Project construction would require conformance with applicable NPDES criteria regarding disposal of extracted groundwater (pursuant to RWQCB Order No. R9-2008-0002).

Long-term Operation and Maintenance Impacts

After completion of construction, erosion and sedimentation effects would be minimal for any of the build alternatives/variations. This conclusion is based on the fact that no net increase of off-site runoff would result from the project (refer to Section 3.11 for additional discussion), as well as the proposed stabilization of project-related DSAs through installation of pavement, permanent erosion control and landscaping.

Implementation of the Two Interchange and One Interchange alternatives would both result in an estimated 126 acres of additional impervious surfaces (e.g., pavement), while the No Interchange alternative would generate approximately 119 acres of new impervious surfaces. All of these acreages would increase somewhat under the potential median and interchange design variations, although as previously noted the overall type, nature and level of the associated impacts would not change substantially. Specifically, impervious surface increases identified for project variations in the Water Quality Technical Report range from approximately 1.3 acres for the 46-foot Median Variation, to 7 acres for the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative (AECOM 2010c). Detailed descriptions and quantifications of impervious surface acreages associated with all the potential variation scenarios are provided in Section 5.0 (Table 5.1) of the project Water Quality Report (AECOM 2010c).

Potential long-term water quality impacts from the build alternatives/variations involve the generation of pollutants related to proposed facility operation and maintenance. Specifically, this would include: (1) sediment (total suspended solids and total dissolved solids) from natural erosion; (2) nutrients (nitrogen/phosphorous) from sources such as landscaping, fertilizers, atmospheric deposition, emulsifiers, surfactants and automobile exhaust; (3) organic matter in soil; (4) pesticides/herbicides from landscaping; (5) metals (dissolved and particulate) from combustion of fossil fuels, wear of brake pads, and corrosion of metal structures; and (6) trash and debris. The potential discharge of these contaminants could affect downstream receiving waters, including impaired segments of the Tijuana River, Tijuana River Estuary and Pacific Ocean shoreline as previously described.

Storm water runoff from roadways and shoulders under the build alternatives would drain directly into proposed biofiltration swales (bioswales) running parallel to the road wherever possible to capture, convey and treat associated runoff. Inlets with concrete aprons would be placed at the downstream end of these swales as needed to route applicable flows into detention facilities, and to comply with any retention and/or peak flow attenuation criteria. In a few cases, pavement flows would be captured within bioswales and discharged to separate off-site cross culverts without being routed to a detention/retention facility. Associated water quality, detention and retention requirements would still be met within these areas, however, due to the minor extent of associated flows and the noted use of bioswales. The project will not significantly impact beneficial uses, as the build alternatives include treatment measures in conformance with jurisdictional requirements, including Caltrans NPDES standards for long-term water quality effects. Preliminary BMPs identified to address project-related impacts and associated conformance requirements are summarized in Section 3.12.4.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to water quality and storm water runoff would result.

### 3.12.4 Avoidance, Minimization, and/or Mitigation Measures

**Build Alternatives and Variations**

Implementation of any of the project build alternatives (with or without related variations) would potentially result in impacts related to water quality and storm water runoff. A number of associated avoidance and minimization measures are identified below that would apply to all of the build alternatives/variations, and would prevent or minimize potential short- and long-term water quality impacts and ensure project conformance with applicable regulatory requirements. Specifically, these measures include the use of short-term BMPs to prevent or minimize potential impacts from construction

operations, as well as design pollution prevention, treatment, and maintenance BMPs for potential long-term impacts.

Short-term (Construction) BMPs

Six construction BMP categories are identified in the Caltrans *Construction Site Best Management Practices Manual* (2003a) to address potential short-term water quality impacts, including temporary soil stabilization, temporary sediment control, wind erosion control, tracking control, non-storm water management, and waste management and materials pollution control. Typical construction BMPs from the Project Water Quality Report, Caltrans Manual and current NPDES requirements that are applicable to the project are summarized below. Specific construction BMPs for the proposed project will be determined during the Design Phase to ensure conformance with all associated regulatory requirements (including preparation/implementation of a project-specific SWPPP as outlined in Section 3.12.1).

*Temporary Soil Stabilization BMPs*

- Implement appropriate construction scheduling and sequencing to: (1) reduce the amount and duration of soil exposed to erosion and vehicle tracking; (2) minimize operations during applicable precipitation events as feasible; and (3) incorporate applicable erosion and sediment controls prior to/during predicted rain events per regulatory requirements.

- Avoid or minimize work and associated construction-related impacts in ESAs.

- Permanently preserve existing vegetation to the maximum extent feasible, and preserve vegetation for as long as possible in areas to be graded/excavated.

- Stabilize disturbed slopes during construction with temporary erosion control in areas where no operations have occurred for 14 days, or before the onset of applicable predicted rain events.

- Use erosion control/stabilizing measures, such as temporary mulch, hydroseeding, soil binders, geotextiles, swales, outlet protection, slope drains, streambank stabilization, and/or slope roughening in applicable areas to reduce erosion.

*Temporary Sediment Control BMPs*

- Use sediment controls to prevent off-site sediment transport and protect the construction site perimeter, soil stockpiles and slopes not under construction for applicable time periods. Specific sediment control measures may include implementation of applicable monitoring/testing efforts, as well as the use of temporary silt fence, check dams, sediment/desilting basins, sediment traps, fiber rolls, active treatment systems, gravel bags, street sweeping/vacuuming, sand bag barriers, straw bales, slope drains, and/or inlet protection.

*Wind Erosion BMPs*

- Implement regular watering and/or application of other dust palliatives as necessary to prevent or alleviate dust generation.

- Comply with local dust control requirements.

*Tracking Control BMPs*

- Implement applicable tracking control efforts for construction vehicles and equipment, potentially including stabilized construction entrances/exits, stabilized construction roadways, entrance/outlet tire washing, and street sweeping.

*Non-storm Water BMPs*

- Implement appropriate water conservation practices such as leak inspection/repair, and use of "dry washing" methods wherever feasible.

- Implement appropriate controls (e.g., testing, filtering and/or treatment) of extracted groundwater prior to discharge, if required, in conformance with applicable NPDES and Caltrans requirements.

- Employ appropriate pollutant-control measures during paving, grinding, pile driving and other construction operations (especially in areas within or adjacent to water courses), including catchment/containment devices for equipment and debris, protecting drainage inlets (e.g., with filter fabric), proper application/control of curing/finishing compounds, regular waste collection/removal, sweeping/vacuuming, preventing wash/rinse water and slurries from entering storm drains or water courses, and stockpiling spill kits and clean up materials.

- Implement appropriate planning, identification and reporting measures to avoid, document and report illicit connections and illegal material discharges.

- Use appropriate practices and procedures to avoid and manage pollutants associated with discharges from potable water and irrigation sources, including regular inspection/repair to ensure proper working order, diverting discharges away from pollutant sources, reuse of water discharges (e.g., for irrigation), and minimizing discharge rates and amounts.

- Implement appropriate controls in vehicle/equipment washing, maintenance and fueling areas to avoid or minimize pollutant discharge into storm drains or water courses. Specific measures may include the use of covers, impermeable liners and containment structures, as well as stockpiling of absorbent clean up materials.

*Waste Management and Materials Pollution Control BMPs*

- Use properly located, spaced, labeled, sealed and designed containers; raised (e.g., on pallets), covered, and/or enclosed facilities; and appropriate containment structures for all hazardous materials storage (including temporary storage).

- Avoid storing incompatible materials (e.g., chlorine and ammonia) in the same location.

- Maintain accurate and up-to-date written inventories and labels for all hazardous material storage and delivery activities/facilities.

- Designate specific hazardous material use, processing, storage/stockpile, clean up and disposal areas; use berms, ditches, covers, and/or impervious liners (or other applicable methods) to provide appropriate protection and containment; implement proper handling/disposal procedures and locations; and post proper storage and handling instructions in an appropriate location.

- Avoid storing hazardous materials near drains or surface water features, and place warning signs in areas of hazardous material use/storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal.

- Properly maintain all construction equipment and vehicles.

- Implement appropriate solid waste management efforts. Specifically, this may include proper location, containment and disposal of construction debris and wastes (e.g., locating dumpsters at least 50 feet from storm drains and water courses, use of sealed containers and watertight dumpsters, and regular trash collection/removal), stockpile management/containment, and regular inspection/clean up.

- Use appropriate waste control measures for operations located over or adjacent to water courses, such as bridge modification/construction and pile driving. Specifically, this may include efforts such as proper equipment maintenance, and control/containment of materials including vehicle fuels/fluids and demolition debris.

- Stockpile appropriate types and quantities of clean-up materials, and post regulatory agency telephone numbers and a summary guide of clean-up procedures, in readily accessible and conspicuous locations on the job site.

- Regularly (at least weekly) monitor and maintain hazardous material use/storage facilities and operations to ensure proper working order, and contain/clean up spills immediately upon discovery.

- Implement concrete waste management procedures such as the use of properly contained concrete washout facilities.

- Properly identify, manage, and dispose of contaminated soil.

- Properly locate, contain, and maintain portable wastewater facilities.

- Properly manage, collect, contain, and dispose of liquid wastes such as drilling fluids and dredging wastes.

*Disposal of Extracted Groundwater*

Specific BMPs to address potential water quality concerns from disposal of extracted groundwater would be determined during the associated NPDES Groundwater Permit process if required, based on site-specific conditions.

Long-term Operation and Maintenance

Based on information in the project Water Quality Report and associated Caltrans guidelines, implementation of any of the project build alternatives and variations would include the use of applicable design pollution prevention, permanent treatment, and maintenance BMPs, as outlined below.

*Design Pollution Prevention BMPs*

Design pollution prevention (DPP) BMPs consist of measures intended to reduce post-construction pollutant generation and discharge to the maximum extent practicable (MEP). Specifically, this involves measures to mimic the natural hydrologic regime, as well as efforts to avoid or minimize the introduction of pollutants into storm drains and natural drainages. Potential DPP BMPs proposed for the project in the Water Quality Report are outlined below, with associated design objectives to prevent downstream erosion, stabilize DSA, and maximize vegetated surfaces consistent with existing Caltrans policies. These objectives would be met through identified DPP BMPs in the following four general categories: (1) consideration of downstream effects related to potentially increased flow; (2) preservation of existing vegetation; (3) use of concentrated flow conveyance systems; and (4) use of slope/surface protection systems.

Consideration of Downstream Effects Related to Potentially Increased Flow. Because the project would increase both the area of impervious surface and related runoff volumes/velocities, the associated effects to downstream channel stability would be evaluated and the following types of measures would be implemented as appropriate:

- Modify channel (both natural and man-made) lining materials, potentially including the use of vegetation, geotextile mats, rock and rip-rap.
- Use energy dissipation devices at culvert outlets.
- Smooth the transition between culvert outlets/headwalls/wing walls and channels to reduce turbulence and scour.
- Incorporate peak flow attenuation facilities to reduce peak discharges.

Preservation of Existing Vegetation. Desirable vegetation that provides sediment and erosion control measures would be protected wherever feasible, including areas where no construction activity is planned within the project limits or where construction would occur at a later date. The following types of measures would be incorporated as appropriate:

- Identify and delineate all areas of vegetation to be retained on contract documents.
- Delineate areas to be preserved in the field prior to the commencement of soil disturbing activities.
- Minimize disturbed areas by locating temporary roadways to avoid impacting existing vegetation, and following existing contours to reduce cut and fill requirements.
- Consider impacts to adjacent vegetation that needs to be preserved when removing vegetation.

Concentrated Flow Conveyance Systems. Concentrated flow conveyance systems consist of permanent design measures that are used alone or in combination to intercept and divert surface flows, and to convey and discharge concentrated flows with a minimum of soil erosion. The following types of measures would be implemented as appropriate:

- Design all DPP BMPs under this category in accordance with applicable portions of the Caltrans Highway Design Manual, including Chapters 813, 830 (Topics 836 and 834.4), 860, 820 (Topics 826 and 827), and 870.

- Use outlet protection devices where localized scour is anticipated.

- Evaluate the risk due to erosion, overtopping, flow backup, or washouts when selecting design flows.

- Consider run-on from off-site sources.

- Appropriately line conveyances when velocities exceed permissible limits.

- Use metal pipe down drains on slopes with grades of 4:1 (horizontal to vertical) or steeper. For slopes with grades that are flatter than 4:1, paved spillways would be used. Corrugated metal flumes with tapered entrances would be used on slopes with grades of 2:1 or flatter for low flow rates.

Slope/Surface Protection System. Surface protection consists of permanent design measures that are used alone or in combination to minimize erosion from completed, disturbed surfaces. A slope surface protection system could incorporate either a vegetated or hard surface. Vegetated surfaces have the advantage of reducing runoff volumes and velocities, which would consequently avoid or minimize erosion/sedimentation and the influx of other pollutants into the storm drain system. When site or slope conditions do not allow the adequate establishment of vegetation, hard surfaces are used. Examples of hard surfaces are rock slope protection, rock blankets, slope paving and gabions. The following measures would be incorporated as appropriate:

- Evaluate the project site based on soil type, climate and topography for the selection of the appropriate vegetation and planting strategy. The vegetation cover would be selected to reduce concentrated flow depths and velocities, as well as to increase the contact time between runoff and vegetation, both of which would improve infiltration and pollutant removal efficiency.

- Strip and stockpile topsoil and existing vegetation (duff) when feasible for use on the completed slopes before applying seed.

- Employ slope rounding, roughening or stepping where feasible to reduce concentrated flows and enhance the effectiveness of temporary and permanent hydroseeding.

- Use hard surfaces in areas where vegetation is difficult to maintain, or where vegetation would not provide adequate erosion control due to slope or soil conditions (e.g., culvert outlets and gore areas).

- Pave below bridge decks at abutments where it is difficult for vegetation to be established.

*Permanent Treatment BMPs*

Treatment BMPs consist of volume- or flow-based devices that remove pollutants from post-construction runoff to the MEP prior to discharge into drainage facilities and/or surface waters. They are typically designed to treat an identified volume of flow from a design storm event (the water quality flow), and to include adequate capacity to accommodate the remaining peak flow volume from the design (25-year)

storm (e.g., through bypass structures). Preliminary assessment of potential treatment BMP types, locations and feasibility has been completed, based on considerations including climate, water volume, soil conditions, physical limitations, and environmental issues. As a result, the following treatment BMPs have been identified for the proposed project in the Water Quality Report (AECOM 2010c): (1) biofiltration strips/swales; (2) infiltration devices; and (3) detention devices. The identified treatment BMPs are described in detail in Section 6.2.1.2 of the project Water Quality Report (AECOM 2010c). These facilities would treat runoff from between 95 (One Interchange) and 99 percent (Two Interchange) of the additional paved areas associated with the project alternatives, and between 82 (Siempre Viva Full Interchange) and 131 percent (SR-125 Connector) of runoff from additional paved areas resulting from the project variations (refer to Table 6.3 of the project Water Quality Report). Additional potential treatment BMPs that are approved for general use by Caltrans and may potentially be applicable to the proposed project include traction sand traps, dry weather flow diversion, gross solid removal devices, media filters, multi-chambered treatment trains, and wet basins (with these potential BMPs described in Appendix C of the Caltrans *Storm Water Quality Handbooks: Project Planning and Design Guide* [Caltrans 2010b]). The specific type, design, and location of treatment BMPs would be determined during the project design phase, based on considerations such as R/W limitations, environmental constraints and hydraulic capacity. In areas where treatment BMPs cannot be implemented (if applicable), vegetation preservation, landscaping, and erosion control efforts would be maximized. The project design would also consider implementing any future treatment BMPs that are approved by Caltrans based on ongoing research and monitoring programs.

*Maintenance BMPs*

Maintenance BMPs are water quality controls used to reduce pollutant discharges during highway maintenance and activities conducted at maintenance facilities. While maintenance activities are typically conducted to control pollutants and limited to dry weather to avoid potential storm water contact, individual operations can potentially result in the discharge of pollutants including petroleum products, sediment, trash and debris, metals, acidic/basic materials, nutrients, solvents, waste paint, and pesticides/herbicides. Maintenance BMPs are grouped into "families" based on individual activities and related conditions. Caltrans Maintenance Supervisors are required to ensure that appropriate BMPs are implemented for maintenance operations, pursuant to requirements in the Storm Water Quality Handbooks, Maintenance Staff Guide (Caltrans 2003d). Specific types of maintenance BMPs that may be applicable to the project include pavement repair controls (e.g., for concrete/asphalt debris and curing compounds), vegetation/irrigation management (e.g., chemical control and runoff prevention), street sweeping, slope and drainage facility repair, and storm drain stenciling.

The previously identified potential treatment BMPs for the proposed project would also be subject to applicable maintenance requirements, pursuant to the Caltrans Storm Water Quality Handbook Maintenance Staff Guide (2003d). Such maintenance would typically include regular inspection and as-needed repair, biannual vegetation management (e.g., removal of woody or excess vegetation), trash and debris removal, erosion/sedimentation remediation, removal of excess sediment, and removal of ponded water or other vector-related problems.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

# 3.13 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

## 3.13.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures, and the 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 that can be expected to occur on a fault over a particular period of time.

## 3.13.2 Affected Environment

A Preliminary Geotechnical Study was previously completed for Phase I of the SR-11/Otay Mesa East POE project (Ninyo & Moore 2007a). This analysis encompassed the eastern portion of the current Tier II project (approximately east of Paseo de las Americas), with associated information used in the following evaluation as applicable. The remaining portion of the proposed Tier II alignment was previously evaluated for geotechnical concerns as part of the approved SR-905 project EIR/EIS (Ninyo & Moore 1999a). In addition to the described geotechnical analyses, two supplemental investigations were prepared by Caltrans for the proposed Tier II project, including a Hydrogeologic Site Assessment/Storm Water Data Report and a Supplemental District Preliminary Geotechnical Report (Caltrans 2009c, 2009e). The results of all the noted investigations are summarized below along with other applicable data, with the listed reports included in Chapter 8.0, *References*. Applicable areas evaluated under the referenced geotechnical analyses are depicted on Figure 3.13-1, *General Geology Map,* The project study area for geologic, soils, seismic and topographic issues (study area) shown on Figure 3.13-1 includes approximately 510 acres, and incorporates the three SR-11 build alternatives (including the associated design variations), the associated POE and CVEF sites, and adjacent areas that may potentially affect or be affected by project implementation.

### Geologic/Topographic Setting

The study area is located within the Peninsular Ranges Geomorphic Province (Province), a region characterized by northwest-trending structural blocks and intervening fault zones. The Province extends approximately 900 miles from the Los Angeles Basin to the southern tip of Baja California, and varies in width from approximately 30 to 100 miles. Bedrock units in the Province include Jurassic metavolcanic and metasedimentary rocks (between approximately 144 and 206 million years old) and Cretaceous igneous rocks (between approximately 65 and 144 million years old) of the Southern California Batholith (a large igneous intrusive body). The coastal portion of the Province in San Diego County (including much of the study area) typically includes a sequence of marine-cut terrace and shallow near-shore deposits forming a dissected coastal plain. These materials are comprised of upper Cretaceous, Tertiary (approximately 2 to 65 million years old), and Quaternary (less than approximately 2 million years old) marine and non-marine sedimentary strata.

Topographically, the Peninsular Ranges Province is composed of generally parallel ranges of steep-sloping hills and mountains separated by alluvial valleys, with adjacent coastal plain/terrace deposits to the west. Geologically recent uplift and erosion has produced the characteristic canyon and mesa topography present today in much of western San Diego County, as well as the deposition of surficial materials including Quaternary alluvium, colluvium and topsoil. Topography within the study area is characterized by generally undulating terrain, with no major geomorphic features such as large

canyons or mountains. On-site elevations range from approximately 640 feet above MSL in the central portion of the study area, to 460 feet above MSL in the easternmost portion of the POE site. Local topographic profiles typically rise gently to the north and east of the study area, with surrounding topographic features including Johnson Canyon to the north, Spring Canyon to the west and the San Ysidro Mountains to the east and northeast.

**Stratigraphy**

As shown on Figure 3.13-1, geologic units underlying the study area include the Quaternary-age Lindavista Formation, the Tertiary-age Otay Formation, and the Jurassic/Cretaceous-age Santiago Peak Volcanics. These units are outlined below in order of increasing age, followed by a summary description of local surficial deposits including alluvium, colluvium, topsoil and fill (which are not depicted in the study area on Figure 3.13-1). As noted in the referenced SR-905 Geotechnical Evaluation, mapped exposures of the Lindavista Formation may also include Quaternary-age stream terrace deposits (with the combined deposits referred to hereafter as the Lindavista Formation). Additional geologic units mapped to the north of the study area include unnamed fanglomerate deposits, which generally consist of consolidated alluvial fan materials and are not discussed further herein.

Lindavista Formation (Ql)

The Lindavista Formation is mapped in the western portion of the study area (approximately between SR-125 and the western study area boundary), and consists of well-consolidated, coarse-grained pebbly sandstone and pebble conglomerate, with local claystone interbeds. This formation typically exhibits a characteristic rust-red color, due to oxidation of iron-rich cement (mainly hematite).

Otay Formation (To)

The Otay Formation is mapped throughout the eastern study area, and consists mainly of poorly cemented and massive (i.e., without distinct structure such as bedding) sandstones, siltstones and claystones, with interbedded bentonite lenses (clay formed from volcanic ash). Based on subsurface exploration (borings and test pits) conducted during the project geotechnical and hydrogeologic investigations (Caltrans 2009c, 2009e), local deposits of the Otay Formation were observed to include generally unconsolidated clayey and silty sands near the surface, with these materials grading into poorly consolidated sandstones, siltstones and claystones. The Otay Formation extends to approximate depths of 32 feet below the surface at the POE site and 100 feet below the surface near Alta Road, and is assumed to continue to increase in thickness further west.

Santiago Peak Volcanics (Jsp)

The Santiago Peak Volcanics are mapped to the east and northeast of the study area, and presumably underlie the study area and vicinity at depth (as noted below). This unit generally consists of metavolcanic rocks and associated volcaniclastic deposits (sedimentary units derived from weathered volcanic rocks), and can exhibit a wide range of compositions and forms. During the noted geotechnical and hydrogeologic investigations, local deposits of the Santiago Peak Volcanics were observed to underlie the Otay Formation in much of the eastern study area, and to consist primarily of sedimentary breccia composed of andesitic[1] gravel and cobbles in a silty-sand matrix. These deposits extend approximately 18 feet below the bottom of the Otay Formation at the POE site, and 30 feet below the Otay Formation at Alta Road (with both of the observed bottom depths representing the termination of boring activities, and the Santiago Peak Volcanics continuing to undetermined depths).

[1] Andesite is a volcanic rock intermediate in composition between basalt and rhyolite, with rhyolite generally representing the volcanic equivalent of granite in composition.

Surficial Deposits

Surficial deposits within the study area include alluvial materials in larger drainages, colluvium (or slopewash) along the toes of slopes, topsoils occurring as a relatively thin (one- to two-foot) layer in most areas, and local fill deposits associated with existing development such as roadways. Alluvium typically consists of unconsolidated or poorly consolidated stream deposits with variable amounts of silt, sand and cobble size grains. Colluvial deposits include loose, unconsolidated materials deposited by gravity, and are generally more angular and more poorly sorted (i.e., encompassing different size grains) than alluvium. Mapped topsoils in the study area consist primarily of clay-rich soils of the Diablo and Salinas series, and loams/clay loams of the Huerhuero and Stockpen series. Table 3.13-1 summarizes mapped soil characteristics. Fill deposits typically consist of sandy materials used as a base layer for development. Local fill potentially encompasses both documented (placed in accordance with established engineering standards) and undocumented materials.

**Table 3.13-1**
**DESCRIPTION OF MAPPED SOIL CHARACTERISTICS**

| Soil Series | Physical Characteristics/Location | Expansion (shrink-swell) Potential | Reactivity | Erosion Potential |
|---|---|---|---|---|
| Huerhuero Loam, 2 to 5, and 5 to 9 percent slopes | Moderately well-drained loams with clay subsoils derived from sandy marine sediments. These soils occur within the POE site in the easternmost study area, and near the western study area boundary. | High, due to the presence of a clay subsoil | Strongly acidic to moderately alkaline (pH 5.1-8.4) | Slight to moderate |
| Diablo Clay, 2 to 9, and 9 to 15 percent slopes | Well-drained, moderately deep to deep clays derived from sandstone and shale. These soils occur in much of the eastern and central portions of the study area. | High, due to clay content | Neutral to mildly alkaline (pH 6.6 to 7.8) | Slight to moderate |
| Salinas Clay, 0 to 2 percent slopes | Well-drained clay loams formed on floodplains and alluvial fans. These soils occur in the western portion of the study area. | High, due to clay content | Neutral to moderately alkaline (pH 6.6 to 8.4) | Slight |
| Stockpen gravelly clay loam, 0 to 2, and 2 to 5 percent slopes | Moderately well-drained and moderately deep clay loams formed on marine terraces. These soils occur in the western portion of the study area. | High, due to clay content | Slightly acidic to moderately alkaline (pH 6.1 to 8.4) | Slight |

Source: SCS 1973

**Structure and Seismicity**

The study area, like most of southern California, is located within a seismically active region that encompasses several major active and potentially active faults (Figure 3.13-2, *Regional Fault Map*). Active faults are defined as those exhibiting historic seismicity or displacement of Holocene deposits (less than approximately 11,000 years old), while potentially active faults have no historic seismicity and displace Pleistocene (between approximately 11,000 and 1.6 million years old), but not Holocene, strata. Southern California has experienced a number of moderate (in the range of 5.0 to 5.9 on the Richter scale) to large (magnitude 6.0 and higher) earthquakes during the past 50 years, although small magnitude earthquakes (below magnitude 5.0) are more common in the coastal San Diego area. All of San Diego

County is within a Seismic Zone 4 designation, which is the highest of four seismic risk zones and is generally interpreted as an area with a 1 in 10 chance of experiencing a 0.4g peak ground acceleration level within the next 50 years (where g is the acceleration due to gravity). As described in the previously referenced geotechnical studies, the Rose Canyon Fault is located approximately 10 miles west of the study area at its closest point and represents the nearest known active fault. This fault is capable of generating peak ground acceleration (or ground motion) values of approximately 0.3g within the study area, in association with an MCE of magnitude 7.2 (Ninyo & Moore 2007a, 1999a).

**Groundwater**

Permanent shallow groundwater is not known to occur within the study area and immediate vicinity. Six borings were drilled to depths of between 26.5 and 130 feet in the eastern portion of the study area (east of Alta Road) as part of the project Hydrogeologic Site Assessment (Caltrans 2009c). No groundwater was encountered in these borings and the referenced report concluded that "[i]t is very unlikely that significant groundwater exists in the Otay Formation…" and "No groundwater was logged within the Santiago Peak Volcanic bedrock, to the maximum extent of…exploratory borings." Historical data identify groundwater depths of between approximately 350 and 485 feet below the surface in areas west of the study area (DWR 1986), although the Hydrogeologic Site Assessment and Supplemental Geotechnical Report identify the potential for shallow perched groundwater to occur locally (Caltrans 2009c, 2009e). Perched groundwater generally consists of shallow, unconfined aquifers separated from the permanent water table by impermeable or semi-permeable strata. Additional discussion of local groundwater is provided in Section 3.11, *Hydrology and Floodplain.*

**National Natural Landmark Status**

Based on the noted geologic and topographic information, the study area is not anticipated to contain any rare, high quality, or scientifically significant geologic or topographic resources (refer also to Section 3.9, *Visual/Aesthetics*), and does not encompass any areas designated as National Natural Landmarks (U.S. National Park Service 2009).

### 3.13.3 Environmental Consequences

The previously referenced geotechnical and hydrogeologic studies do not identify any conditions that would necessarily preclude project development, although a number of potential geologic issues are noted and several recommendations are provided to address these concerns. Specifically, these recommendations include conducting a comprehensive geotechnical evaluation prior to project design and construction. This investigation would include appropriate subsurface exploration and laboratory testing to further evaluate geologic conditions and provide additional information on the engineering characteristics of earth materials and associated conditions present within the study area. From these data, specific geotechnical recommendations would be provided regarding the design and construction of the project facilities. In addition to the noted detailed evaluation, the preliminary geotechnical and hydrogeologic analyses identify a number of recommendations related to individual seismic and non-seismic geotechnical hazards within the study area, as summarized below for the project alternatives. Potential project impacts related to shallow groundwater and erosion/sedimentation are addressed in Section 3.11, *Hydrology and Floodplain*, and Section 3.12, *Water Quality and Storm Water Runoff*, of this EIR/EIS, respectively.

**Build Alternatives and Variations**

The following analysis of potential geologic, soil, seismic and topographic impacts is applicable to all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or

without the associated variations. All of the potential alternatives and design variations would encounter similar geologic, soil, seismic and topographic conditions, with the type and nature of associated impacts also therefore the same. While the specific locations and extent of these impacts could vary slightly among the build alternatives and design variations, the overall level of impact and associated requirements to address these potential effects would be the same.

Seismic Hazards

*Fault Rupture*

Project implementation would generally not to be subject to seismic ground rupture hazards and/or related effects such as lurching (i.e., the rolling motion of surface materials associated with passing seismic waves). This conclusion is based on the fact that no known active faults are located within or adjacent to the study area. While the potential for ground rupture and lurching cannot be totally discounted (e.g., such effects could possibly occur locally as a result of off-site seismic events), the project Preliminary Geotechnical Study (Ninyo & Moore 2007a) concludes that "[g]round surface rupture is not considered a hazard." This conclusion is also considered applicable to the western portion of the study area, based on conclusions in the SR-905 Geotechnical Evaluation (Ninyo & Moore 1999a) and the reasons noted above.

*Ground Acceleration*

The estimated peak ground acceleration level for the study area and vicinity of 0.3g is representative of similar areas in southern California, and could potentially result in seismic ground acceleration impacts to proposed facilities, such as structures, foundations, and/or utilities. Specifically, the project Preliminary Geotechnical Study concludes that the study area has a "[h]igh potential for experiencing strong ground motion…", with a similar assessment provided for the western portion of the study area in the SR-905 Geotechnical Evaluation (Ninyo & Moore 2007a, 1999a). Based on these conclusions, additional investigation is recommended in the associated studies to verify and/or modify the identified seismic design parameters and related assumptions, as applicable. The project would incorporate appropriate design and construction measures to accommodate projected seismic loading, pursuant to recommendations in the referenced preliminary studies, as well as subsequent detailed geotechnical evaluation. This would include peak ground acceleration levels, along with applicable seismic parameters from sources such as Caltrans standards, the International Building Code (IBC), and the related California Building Code (CBC).

*Liquefaction and Seismically Induced Settlement*

Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. Loose, granular materials with low relative densities are most susceptible to these effects, with liquefaction potential greatest in saturated soils at relatively shallow depths. Liquefaction most typically results from seismic ground acceleration, with the resulting loss of support and/or related effects such as seismically induced settlement potentially generating impacts to surface and subsurface facilities including pavement, foundations, and utilities. The majority of the study area is underlain by dense bedrock materials (i.e., the Otay and Lindavista formations), with shallow groundwater not known or expected to be present. Accordingly, the referenced geotechnical studies both generally conclude that formational materials are not subject to liquefaction or seismically induced settlement (Ninyo & Moore 2007a, 1999a). Portions of the study area such as drainages and slopes, however, that encompass alluvial or colluvial materials may be liquefiable and/or subject to seismically induced settlement. Areas encompassing these types of deposits, as well as other unsuitable surface materials including undocumented fill and topsoil, are recommended for additional liquefaction/settlement analysis as part of the noted detailed geotechnical evaluation. Project implementation would include completion of such

analysis and conformance with associated recommendations and applicable Caltrans and other appropriate regulatory/technical standards (e.g., the IBC and CBC).

*Tsunamis and Seiches*

Tsunamis are long wavelength (i.e., long relative to the underlying ocean depth) ocean waves generated by sudden movements of the ocean bottom during events such as submarine earthquakes, volcanic activity, or landslides. The referenced geotechnical studies both conclude that tsunami hazards are not a concern, based on the elevation and inland location of the study area (Ninyo & Moore 2007a, 1999a).

Seiches are defined as wave-like oscillatory movements in enclosed or semi-enclosed bodies of water such as lakes or reservoirs. Potential effects from seiches include flooding damage and related hazards (e.g., erosion) in surrounding areas from spilling or sloshing water, as well as increased pressure on containment structures. Because the study area is not located adjacent to or in close proximity to any large upstream water bodies, no impacts related to seiche hazards are anticipated from project implementation.

Non-seismic Hazards

*Landslides and Slope Instability*

The occurrence of landslides and other types of slope failures (e.g., rock falls) is influenced by a number of factors including slope grade, geologic and soil characteristics, moisture levels, and vegetation cover. Landslides can be triggered by one or more specific or combination of events, such as gravity, fires, precipitation, and seismic activity. Landslide hazards within the study area are identified as generally low in the referenced geotechnical studies, based on topographic profiles and the lack of identified on-site or adjacent landslide deposits *(*Ninyo & Moore 2007a, 1999a). Due to proposed excavation and manufactured slope construction in areas underlain by the Otay Formation, however, potential manufactured slope instability impacts could occur in association with conditions such as claystone and/or bentonitic clay beds (which exhibit inherent weakness planes). Evaluation of potential slope instability impact would be conducted as part of the previously noted detailed geotechnical evaluation. Project implementation would include conformance with associated recommendations from this analysis, as well as applicable regulatory/technical requirements from Caltrans or other standards (e.g., the IBC and CBC).

Additional potential issues related to slope instability are associated with temporary (construction-related) excavations. Specifically, slope instability in such excavations could result in associated potential safety impacts for construction personnel. Project implementation would include conformance with applicable Caltrans, Occupational Safety & Health Administration (OSHA), California Division of Occupational Safety and Health (Cal/OSHA), and/or other regulatory/technical standards related to this issue, to ensure excavation stability.

Potential concerns related to slope instability from short-term (construction) surficial effects such as erosion and sedimentation are discussed in Section 3.12, and would be addressed through the implementation of appropriate construction BMPs in conformance with applicable regulatory standards.

*Retaining Walls/Footings/Foundations*

The project design includes several retaining walls and over- or undercrossing structures associated with proposed interchanges and local road crossings. Evaluation of potential impacts related to the design of footings, and other stability concerns (e.g., soil and/or hydrostatic loading) would be conducted as part of

the previously noted detailed geotechnical evaluation. Project implementation would include conformance with the recommendations from this analysis, as well as applicable regulatory/technical requirements from Caltrans or other standards (e.g., the IBC and CBC).

*Expansive Soils*

Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of certain clay minerals, and can affect the integrity of facilities such as pavement, foundations, or drainage structures. The previously referenced geotechnical and hydrogeologic evaluations all identify potential concerns related to the occurrence of expansive soils within the study area. These potential impacts are associated primarily with clay-bearing deposits of the Otay Formation, with the project Supplemental Geotechnical Report concluding that approximately 30 percent of the proposed SR-11 alignment in the eastern study area could be underlain by medium to highly expansive soils (Caltrans 2009e). In addition, a number of surficial topsoil deposits within the study area may also exhibit expansive behavior as summarized in Table 3.13-1. Evaluation of potential impacts related to expansive soils would be conducted as part of the previously noted detailed geotechnical evaluation. Project implementation would include conformance with associated recommendations from this analysis, as well as applicable regulatory/technical requirements from Caltrans or other standards (e.g., the IBC and CBC).

*Corrosive Soils*

Soils with corrosive properties such as pH, resistivity, and/or chloride/sulfate content can potentially affect the integrity of concrete or metal structures such as foundations, footings, pavement, and reinforcing steel. The referenced geotechnical evaluations identify the potential for corrosive soils associated with the Otay Formation (Ninyo & Moore 2007a, 1999a), with a number of surficial topsoil deposits also potentially exhibiting corrosive properties as shown in Table 3.13-1. Evaluation of potential impacts related to corrosive soils would be conducted as part of the previously noted detailed geotechnical evaluation. Project implementation would include conformance with associated recommendations from this analysis, as well as applicable regulatory/technical requirements from Caltrans or other standards (e.g., the IBC and CBC).

*Excavation/Generation of Oversize Materials*

Proposed excavation within formational materials (including the Lindavista Formation) may produce oversize materials and associated potential impacts if such materials are used in engineered fill. Specifically, this could entail differential compaction (i.e., variations in compaction levels over short distances) and related effects to overlying pavement, structures and/or utilities. Evaluation of potential impacts related to oversize materials would be conducted as part of the previously noted detailed geotechnical evaluation. Project implementation would include conformance with associated recommendations from this analysis, as well as applicable regulatory/technical requirements from Caltrans or other standards (e.g., the IBC and CBC).

*Mineral Resources*

The referenced geotechnical evaluations both conclude that the potential occurrence of economically recoverable mineral resources within the study area is low, based on literature review, field reconnaissance and subsurface exploration efforts (Ninyo & Moore 2007a, 1999a). Accordingly, no associated impacts are anticipated from project implementation.

*National Natural Landmarks*

As previously noted, the study area does not encompass any rare, high quality or scientifically significant geologic or topographic resources, and is not within any areas designated as National Natural Landmarks. Accordingly, no associated impacts would occur from project implementation.

**No Build Alternative**

Under the No Build Alternative, the development actions described for the three build alternatives and variations would not occur, and no associated impacts related to geologic, soil, seismic, or topographic conditions would result.

## 3.13.4 Avoidance, Minimization, and/or Mitigation Measures

**Build Alternatives and Variations**

Based on the discussions provided above in Section 3.13.3, no substantial impacts related to geology, soils, seismicity, and topography would occur under any of the identified build alternatives (with or without the potential variations), and no associated mitigation measures are required. The project geotechnical investigations, however, recommend that additional detailed subsurface exploration and laboratory testing be conducted prior to project design and construction. These evaluations, which are standard Caltrans requirements, would assess subsurface conditions in proposed development areas and provide related information/recommendations regarding engineering characteristics of associated earth materials. From these data, specific recommendations would be generated for applicable geotechnical issues to ensure conformance with associated regulatory and design requirements. The following types of standard design and construction measures may be considered in the detailed geotechnical investigations for all three build alternatives and associated design variations, based on recommendations in the preliminary analyses, as well as applicable Caltrans and regulatory/industry standards (e.g., the IBC and CBC). Implementation of these or other appropriate measures identified during detailed investigations would avoid or minimize any potential impacts related to geology, soils, seismicity, or topography for the build alternatives and design variations.

- Potential impacts related to seismic ground acceleration could be addressed or avoided through efforts such as: (1) conformance with applicable seismic parameters from sources including Caltrans standards and the IBC/CBC (including seismic zone, subsurface profile types, seismic and near-source coefficients for acceleration and velocity, and the seismic source); (2) use of properly engineered fill; (3) appropriate foundation, footing, and pavement design; (4) use of properly reinforced concrete and masonry; and (5) appropriate structure and utility design.

- Potential liquefaction and seismic settlement effects could be addressed or avoided through efforts such as: (1) conformance with applicable seismic parameters from sources including Caltrans standards and the IBC/CBC; (2) removal and recompaction and/or replacement of materials susceptible to liquefaction or seismic settlement with engineered fill; (3) in-place soil and/or structural modifications such as compaction grouting, soil mixing, dynamic compaction, or driving piles below liquefiable layers; and (4) use of subdrains in appropriate areas to avoid saturation of surficial materials.

- Potential impacts related to landslides and slope/excavation instability hazards could be addressed or avoided through efforts such as: (1) removal/replacement of landslide-prone materials (e.g., claystone or bentonite) in applicable areas; (2) use of stabilizing facilities such as buttresses or stability fills in applicable areas; (3) limitation of individual manufactured slope grades and/or

heights per geotechnical recommendations; (4) use of native and/or drought-tolerant landscaping, erosion/sedimentation controls, irrigation management, and appropriate drainage facilities on manufactured slopes; and (5) conformance with applicable Caltrans, OSHA and Cal/OSHA standards for temporary (construction-related) excavations, such as limiting grades and incorporating appropriate shoring or other stabilizing features.

- Potential impacts related to the instability of retaining walls and over or undercrossing structures (or other pertinent facilities) could be addressed/avoided through efforts such as: (1) use of appropriate footing and foundation design per geotechnical recommendations and Caltrans or other appropriate standards (e.g., IBC/CBC); (2) use of stabilizing techniques such as soil nail, tieback and/or MSE walls in applicable areas; (3) conformance with appropriate geotechnical recommendations and Caltrans or other regulatory/industry standards regarding wall design and loading (e.g., IBC/CBC); and (4) provision of appropriate drainage controls to prevent ponding, undermining and/or surficial saturation.

- Expansive characteristics in surficial materials could be addressed or avoided through efforts such as: (1) removal and recompaction and/or replacement of unsuitable soils with engineered fill; (2) selective placement and/or capping of expansive soils; (3) use of subdrains and moisture conditioning in applicable areas of expansive soils to avoid saturation; and (4) soil mixing and use of specially designed foundations or slabs in areas of expansive deposits.

- Potential impacts associated with corrosive soils could be addressed or avoided through efforts such as: (1) removal of unsuitable deposits and replacement with non-corrosive fill, (2) use of corrosion-resistant construction materials and (3) installation of cathodic protection devices.

- Potential impacts related to oversize materials could be addressed or avoided through efforts such as: (1) removal and off-site disposal of oversize materials unsuitable for use in on-site fills; (2) selective burial of oversize materials in deeper fills; or (3) crushing of oversize materials to an appropriate size for use in on-site fill.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

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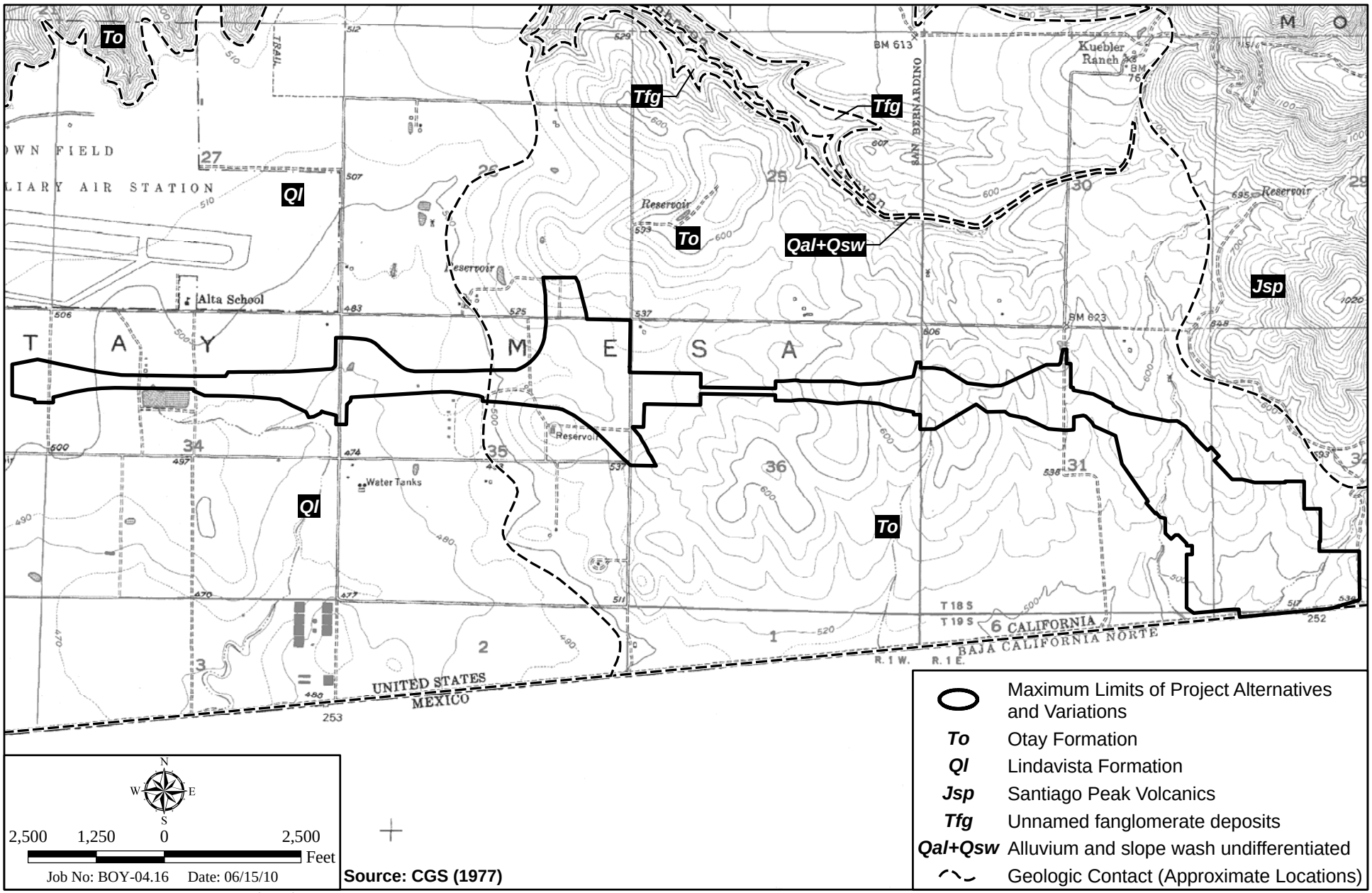


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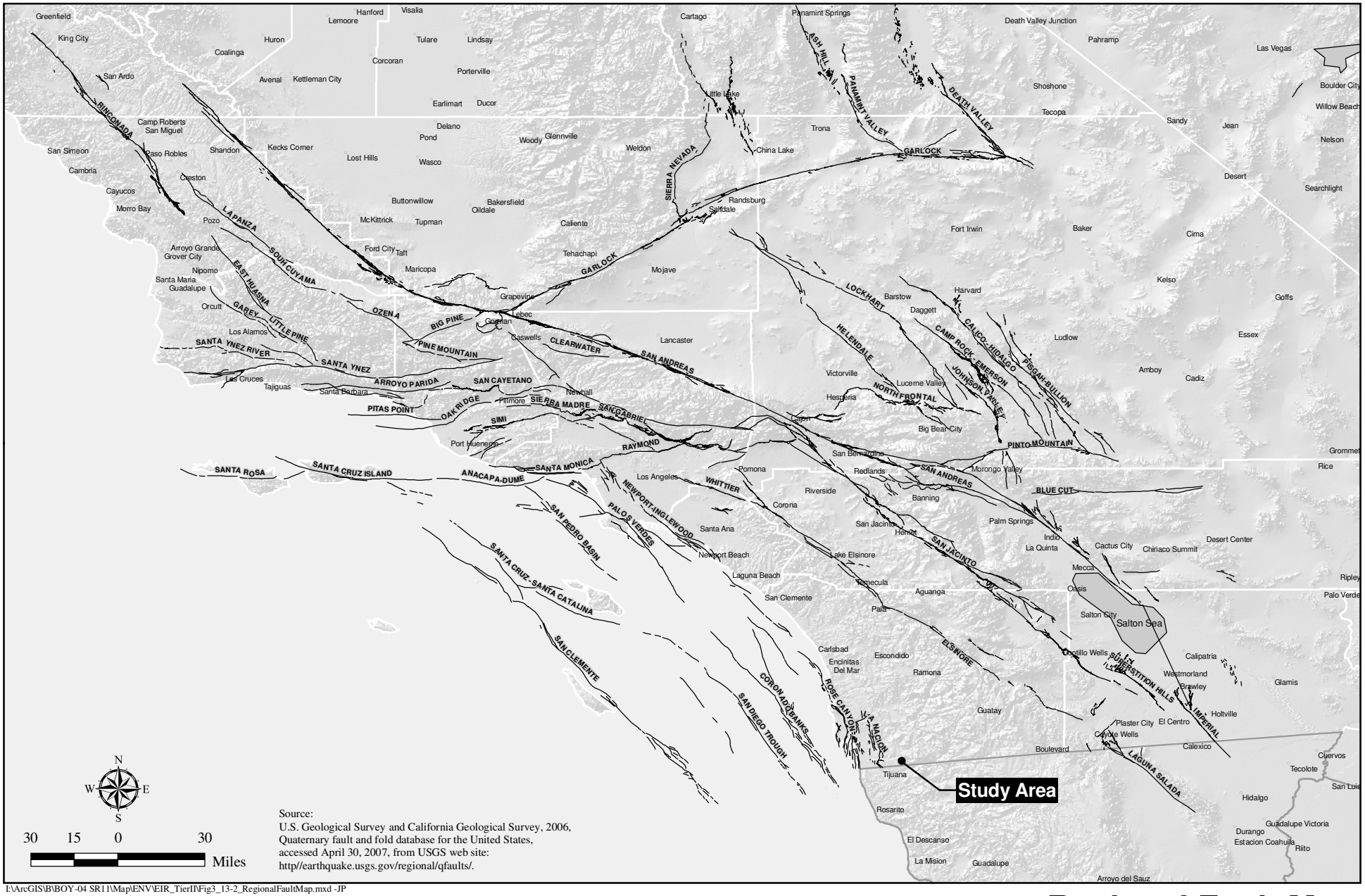
# General Geology Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II ENVIRONMENTAL IMPACT REPORT

Figure 3.13-1

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# Regional Fault Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.13-2

# 3.14 PALEONTOLOGY

Paleontology is the study of life in past geologic time based on fossil plants and animals. Paleontological resources are the remains and/or traces of prehistoric plant and animal life, exclusive of humans. Fossil remains such as bones, teeth, shells, leaves, and wood are found in the geologic deposits (formations) within which they were originally buried. Fossils are considered non-renewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced. For purposes of this evaluation, paleontological resources include the actual fossil remains, as well as the collecting localities and associated geologic formations.

## 3.14.1 Regulatory Setting

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects (e.g., Antiquities Act of 1906 [16 USC 431-433], and the Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by CEQA, the California Code of Regulations (CCR), Title 14, Division 3, Chapter 1, Sections 4307 and 4309, and PRC Section 5097.5.

## 3.14.2 Affected Environment

A Paleontological Resource Assessment (PRA) has been prepared for the project (San Diego Natural History Museum [SDNHM] 2009). This assessment includes a Paleontological Evaluation Report and a preliminary Paleontological Mitigation Plan (PMP). The 2009 PRA does not include the western portion of the proposed project located west of the existing SR-905/SR-125 Interchange, as this area was added to the project alignment after completion of the PRA. In 2010, a Paleontological Update was prepared for the project (Caltrans 2010c), which evaluated the project west of the interchange. The western area generally corresponds to mapped occurrences of the Lindavista Formation within the project alignment, as shown on Figure 3.13-1. The approximately 1,000-acre paleontological resource study area (study area) used for the following analysis includes the area evaluated in the PRA, as well as additional area to the west evaluated in the Paleontological Update. This combined study area boundary encompasses all potential project-related activities that may affect paleontological resources, such as grading and excavation. Applicable information from the project PRA and Paleontological Update is included in the following analysis, with both studies listed in Chapter 8.0, *References*.

The study area is within the southern portion of the Peninsular Ranges Geomorphic Province, which is dominated by plutonic igneous rocks of late Mesozoic age (approximately 125 to 90 million years old), and pre-batholithic metamorphic rocks of middle Mesozoic age (approximately 200 to 140 million years old). Along the coastal plain of San Diego County, these crystalline basement rocks are typically overlain by younger sedimentary deposits of Cenozoic age (approximately 45 million to 10,000 years old). The study area is characterized by metavolcanic bedrock in the easternmost areas (the San Ysidro Mountains) and sedimentary deposits blanketing the lower lying mesa surfaces to the west.

As seen on Figure 3.13-1, the majority of the study area is underlain by sedimentary rocks of the Otay and Lindavista formations. The Otay Formation is mapped in much of the eastern study area and is Oligocene in age (approximately 34 to 23 million years old), with local sedimentary units dated at approximately 29 million years old. The Otay formation has been divided into three members that typically exhibit a combined thickness of less than 120 feet (although localized exposures can encompass a combined thickness of up to 400 feet). This formation generally becomes finer grained from bottom to top, with the lower unit exhibiting cobble to boulder size grains, the middle unit comprised of sandstones and gravels, and the upper unit composed of sandstones and claystones (refer to Section 3.13, *Geology/Soils/Seismicity/Topography*, for additional description of the Otay Formation and other local

geologic units). Current records at the SDNHM document six paleontological collecting sites located within one mile of the study area, with numerous additional fossil localities known from the upper Otay Formation unit in other portions of Otay Mesa. These localities have produced well-preserved remains of a diverse assemblage of terrestrial vertebrates, and the Otay Formation is considered to be the richest source of late Oligocene terrestrial vertebrates in California (Deméré 1988). Because of this paleontological richness, the Otay Formation is assigned a high level of paleontological resource sensitivity.

The Lindavista Formation is mapped in the western portion of the study area, and represents marine and/or non-marine deposits of Early to Middle Pleistocene age (approximately 0.5 to 1.6 million years old). As noted in the geotechnical analysis prepared for the previously approved SR-905 project (Ninyo & Moore 1999a), mapped exposures of the Lindavista Formation may also include Quaternary-age stream terrace deposits (with the combined units hereafter referred to as the Lindavista Formation). Typical exposures of the Lindavista Formation encompass coarse-grained pebbly sandstones and pebble conglomerates, with local claystone interbeds. These rocks have an average local thickness of approximately 15 to 30 feet, and were deposited under conditions including fluvial (river-deposited), aeolian (wind-deposited), and shallow nearshore marine environments. Fossil occurrences are generally uncommon, although recovered resources have included nearshore marine invertebrates (e.g., clams, scallops, snails and barnacles), and (less frequently) marine vertebrates such as sharks and whales (Caltrans 2010c). Based on the described fossil occurrences and associated potential for producing important remains, the Lindavista Formation is assigned a moderate level of paleontological resource sensitivity.

Jurassic and Cretaceous-age bedrock of the Santiago Peak Volcanics is mapped to the east and northeast, and likely underlies portions of the study area (refer to Figure 3.13-1). This formation consists primarily of volcanic and metavolcanic rocks, although metasedimentary units appear to be interbedded with the volcanic rocks in some locations (refer to Section 3.13 for additional description of the Santiago Peak Volcanics). In general, the molten origin of most units within the Santiago Peak Volcanics precludes the possible preservation/discovery of fossil remains. This formation has produced localized paleontological resources, however, including petrified wood from sites in Mira Mesa and Rancho Santa Fe, as well as microfossils (radiolarians) and macroinvertebrates (e.g., clams) from local metasedimentary units. There are currently no records of any paleontological collecting sites in these rocks south of San Clemente Canyon in the City of San Diego. Because the majority of the Santiago Peak Volcanics within the study area has been characterized as metavolcanic, this unit is assigned a zero level of paleontological resource sensitivity.

Also assigned a zero level of paleontological resource sensitivity within the study area are those locations encompassing artificial fill or previously disturbed sediments, including sites along existing roadways and associated with existing structures or other development. Alluvial and colluvial materials within the study area are assigned a minor (or low) paleontological resource sensitivity, based on their relatively young age and/or high energy depositional history.

### 3.14.3 Environmental Consequences

#### Build Alternatives and Variations

The following analysis of potential impacts to paleontological resources is applicable to all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or without the associated variations. All of the potential alternatives and variations would encounter similar formational conditions, with the type and nature of associated impacts therefore also the same. While the specific locations and extent of these impacts could vary slightly among the build alternatives and design

variations, the overall level of impact and associated requirements to address these potential effects would be the same.

Potential impacts to scientifically significant paleontological resources typically occur in the form of the destruction of buried fossil remains during construction-related earthmoving activities (e.g., grading and excavation). Proposed earthmoving activities associated with the various alternatives and design variations would potentially encounter geologic deposits assigned zero, low, moderate, and high levels of paleontological resource sensitivity, as outlined above in Section 3.14.2. Specifically, deposits with zero sensitivity affected by the build alternatives include artificial fill, disturbed sediments, and the Santiago Peak Volcanics, while affected deposits with low sensitivity include alluvium and colluvium. Deposits with high paleontological resource sensitivity potentially affected by the build alternatives include the Otay Formation in the eastern portion of the study area (refer to Figure 3.13-1).

The extent of potential impacts to the Otay Formation under the One Interchange Alternative would vary slightly from the Two Interchange Alternative, based on the location of the proposed single interchange at Alta Road. The extent of potential impacts to the Otay formation under the No Interchange Alternative would be slightly less than for the other build alternatives, based on the slightly smaller impact footprint resulting from the lack of proposed interchange facilities.

Construction impacts along the project expansion into the SR-905 footprint would be limited almost exclusively to within the median of SR-905, which is currently under construction. Those activities occurring as part of the SR-11 project include widening of the connector ramps from SR-11 to SR-905 and narrowing the median to accommodate additional lanes. These areas have been completely disturbed from activities currently occurring as part of the SR-905 project. Paleontological monitoring for fossil discoveries has already occurred or is ongoing in this area. None of the SR-11 work proposed along SR-905 would extend into undisturbed paleontological deposits (it would occur entirely within artificial fill). Accordingly, there is no potential for paleontological resources to be affected in this area, as the Lindavista Formation would not be impacted.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts related to paleontological resources would result.

### 3.14.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

Construction of any of the described SR-11 build alternatives, along with the associated POE and CVEF sites, would impact the Otay Formation, which is assigned a high level of paleontological resource sensitivity. Accordingly, project implementation would potentially impact important paleontological resources and would require mitigation to address these potential impacts. The following preliminary measures are identified in the project PMP and would be implemented as part of the proposed project:

- Once specific design layouts for proposed project elements and alternatives are available, details of the areas where mitigation is specifically required would be called out in a final PMP.

- A qualified paleontologist would attend the project pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and

techniques, who is knowledgeable in the geology and paleontology of San Diego County, California, and who has worked as a paleontological mitigation project supervisor in the region for at least one year.

- A paleontological monitor would be on site on a full-time basis during the original cutting of previously undisturbed deposits of high sensitivity paleontological resources (i.e., the Otay Formations) to inspect exposures for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor would work under the direction of a qualified paleontologist. As grading progresses, the qualified paleontologist and paleontological monitor would have the authority to reduce the scope of the monitoring program to an appropriate level if it is determined that the potential for impacts to paleontological resources is lower than anticipated.

- When fossils are discovered, the paleontologist (or paleontological monitor) would recover them appropriately. In most cases, fossil salvage can be completed in a relatively short period of time, although some fossil specimens (such as a complete large mammal skeleton) may require a more extended salvage period. In these instances, the paleontologist (or paleontological monitor) would be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains, such as isolated mammal teeth, it may also be necessary to set up a screenwashing operation on the site.

- During the monitoring and recovery phases of the PMP, the qualified paleontologist and/or paleontological monitor would also routinely collect stratigraphic data such as lithology, the vertical and lateral extent of strata, the nature of upper and lower contacts, and the taphonomic character of exposed strata (i.e., the study of decaying organisms over time and how they become fossilized). Collection of such data is critical for providing a stratigraphic context for any recovered fossils.

- Fossil remains collected during monitoring and salvage would be cleaned (removed of extraneous enclosing sedimentary rock material), repaired (consolidation of fragile fossils and gluing together broken pieces), sorted (separating fossils of the different species), and catalogued (scientific identification of species, assignment of inventory tracking numbers, and recordation of these numbers in a computerized collection database) as part of the mitigation process.

- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would be deposited in a scientific institution with paleontological collections. Curation of the fossils would be accompanied by financial support for preparation, curation and initial specimen storage, if this work has not already been completed.

- A final summary report would be completed that outlines the results of the mitigation program. This report would include discussions of the methods used, stratigraphic section(s) exposed and documented, fossils collected, and significance of recovered fossils.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

# 3.15 HAZARDOUS WASTE/MATERIALS

## 3.15.1 Regulatory Setting

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.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act (CAA)
- Safe Drinking Water Act
- Occupational Safety & Health Act
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, EO 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of RCRA (EPA 2007a) and the California Health and Safety Code (2007). Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

## 3.15.2 Affected Environment

Two ISAs have been prepared for the proposed SR-11/Otay Mesa East POE project (Ninyo & Moore 2009, 2007b, and two soil sampling reports were prepared (Ninyo & Moore 2010a, Ninyo & Moore 2010b). The western portion of the proposed project area (west of the SR-905/SR-125 Interchange) was evaluated as part of the ISA conducted for the previously approved SR-905 project (Ninyo & Moore 1999b). An area of approximately 7.4 acres located south of the POE site and within U.S. Border Patrol jurisdiction is within the project impact footprint for all three alternatives. Because this area was not available for access during project investigation, it was not included in the ISA. Portions of the described area have also been previously developed for construction of a border fence, and may therefore have been subject to associated hazardous materials investigation and (if applicable) remediation.

**Summary of Existing Hazardous Waste/Material Conditions**

Commonly encountered conditions/materials that may represent environmental concerns within the study area include the presence of (1) treated wood that may contain chemical preservatives; (2) asbestos containing materials (ACMs) such as insulation for subsurface pipelines and buildings; (3) lead based paint (LBP) on facilities such as curbs, poles and roadway striping; and (4) mercury-containing switches/fluorescent lights, and polychlorinated biphenols (PCB)-containing lights and associated ballasts. Based on the information presented in the referenced investigations, which included visual site reconnaissance and owner/operator interviews as well as regulatory agency file and database review, the following existing conditions related to hazardous wastes/materials were observed within the study area:

- The majority of the study area has been used for agricultural operations in the past, contaminated soils could potentially be present in association with previous activities such as pesticide storage, mixing and/or disposal, and vehicle/equipment fueling and maintenance.

- A number of industrial properties are present in the study area, including an industrial storage lot, a power plant, and numerous manufacturing/business park facilities. Based on the nature of these sites, such locations may represent hazardous or non-hazardous waste related concerns.

- Several truck/freight parking and/or storage sites are present in the study area, generally near SR-905 south of Airway Road, that encompass petroleum staining on unpaved areas and/or distressed (e.g., cracked) pavement surfaces that may be associated with vehicle fueling operations (potentially including USTs).

- A vehicle auction yard is present in the eastern study area on Parcel No. 648-070-13. Soils impacted with petroleum hydrocarbons and containing low concentrations of metals were identified during the hazardous waste investigation, and represent non-hazardous wastes.

- Several sites with no recorded unauthorized release in the study area are identified as potential hazardous waste concerns due to on-site use/storage of hazardous materials and the lack of access during field investigation.

## 3.15.3 Environmental Consequences

**Build Alternatives and Variations**

The following analysis of potential hazardous waste/materials impacts is applicable to all three build alternatives, with or without the associated variations. This conclusion is based on the fact that all of the potential build alternatives and variations encompass similar facility types and locations, as well as similar hazardous waste/materials baseline conditions.

- Much of the study area was previously used for agricultural activities such as irrigated and non-irrigated cultivation, and may have been subject to the application and/or storage of related materials including chemical pesticides/herbicides and fertilizers (potentially including wastewater sludge). Arsenic and organochlorine pesticides were the primary constituents of concern identified in the soil sampling reports.

- An existing vehicle auction yard located on Parcel No. 648-070-13 in the eastern study area has encompassed vehicle storage and related activities on unpaved areas since at least the early 1990s. Shallow soils were determined to be impacted with petroleum hydrocarbons. Specifically, potential impacts associated with on-site soil contamination would be the most extensive under the Alta Road Interchange, and the least extensive for the No Interchange

Alternative. All three build alternatives would affect this property, however, and would be subject to the associated mitigation identified in Section 3.15.4.

- A number of industrial properties/sites within the study area were unavailable for access during the associated ISA investigations, and may encompass the generation, use and/or storage of hazardous wastes/materials.

- A number of truck parking/freight-related facilities located near Airway and Harvest roads in the study area were observed to encompass ground staining on unpaved areas and/or areas with distressed (e.g., cracked) pavement surfaces, and/or concrete pads (which may have been used in association with vehicle fueling and/or maintenance activities).

- A number of existing facilities in various portions of the study area may contain materials including LBP, ACMs, treated wood, and/or PCBs.

- The project impact footprint includes an approximate 7.4-acre area located south of the project POE site that is under U.S. Border Patrol jurisdiction. While no known hazardous material concerns are associated with this area (e.g., no sites were identified therein during agency file/database review), the noted area was not available for access during project investigation. Accordingly, this area may potentially exhibit hazardous materials issues associated with previous agricultural or other uses.

- Operation of the Otay Mesa East POE and/or CVEF sites could potentially involve the use and on-site storage of hazardous materials such as vehicle fuels (e.g., gasoline and/or diesel), with associated potential for accidental release.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no impacts related to hazardous wastes/materials would result.

### 3.15.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

A number of avoidance, minimization and mitigation measures are provided in the project ISAs and soil sampling reports to address the identified potential hazardous and non-hazardous waste concerns and health and safety environmental concerns, including requirements for additional site assessment and (if appropriate) remediation in applicable areas.

Because the SR-905 project in the western study area is currently under construction, and all proposed SR-11 facilities in the western portion of the study area would be located within the SR-905 R/W, no associated mitigation requirements are anticipated therein.

- At the vehicle auction yard in the east portion of the study area (Parcel No. 648-070-13), soil sampling documented the presence of soil impacted with concentrations of petroleum hydrocarbons that would represent non-hazardous waste. Soil generated within the upper 1.5 to 2 feet at this site from subsurface disturbance activities including grading, excavation or utility trenching may constitute a non-hazardous waste per associated regulatory guidelines, and would be managed, profiled, transported, and/or disposed of accordingly. This may include obtaining regulatory authority for on- or off-site reuse of impacted soil (e.g., as fill), or off-site disposal at an appropriate facility.

- Additional assessment would be conducted prior to property acquisition of industrial sites in the eastern study area that would be impacted by the proposed project and were not accessible during the project ISA investigations. These assessments would, at a minimum, include site reconnaissance to document evidence of potential hazardous waste/material generation, use and/or storage, as well as related hazardous and non-hazardous environmental concerns and associated remedial/regulatory requirements.

- Field soil sampling and laboratory testing would be conducted to evaluate the potential occurrence of contaminants where soil staining or staining on distressed pavement was observed followed by proper handling and disposal.

- For agriculturally-related contaminants, soil generated within the upper 0.5 foot in this area from subsurface disturbance activities including grading, excavation or utility trenching may constitute a waste per associated regulatory guidelines, and would be managed, profiled, transported, and/or disposed of accordingly. This would involve chemical classification prior to reuse or disposal based on the analytical testing results of associated samples, and may require (depending on test results) obtaining regulatory authority for on- or off-site reuse of impacted soil (e.g., as fill), or off-site disposal at an appropriate facility.

- For areas of hazardous or non-hazardous waste environmental concern identified within the project construction footprint, a site Community Health and Safety Plan would be prepared prior to project initiation to document appropriate measures to manage potential health and safety hazards to project workers and the general public.

- A Soil Management Plan (SMP) would be prepared to address the potential for encountering areas of potential environmental concern during associated grading, excavation, or other subsurface disturbance. The project SMP would identify specific measures to address efforts including monitoring, handling, stockpiling, characterization, on-site reuse, export, and disposal protocols for excavated soil.

- Appropriate references regarding the potential to encounter contaminated soil and/or groundwater would be included in construction contract specifications so that the contractor(s) can incorporate related requirements into their scope of work.

- Municipal (household) trash, construction debris deposits, soil stockpiles, and other pertinent materials would be removed from all proposed development areas and disposed of in accordance with applicable regulations.

- If conditions suggestive of soil contamination (e.g., discoloration or odor generation) or other potential environmental issues are encountered during project construction, additional assessment would be conducted by a qualified environmental professional. If contamination or other applicable conditions are encountered, additional environmental investigation and/or mitigation may be required by applicable regulatory agencies.

- Surveys would be conducted prior to project-related disturbance in applicable areas to identify structures, infrastructure, or other facilities that may contain hazardous materials including LBP, ACMs, treated wood, PCBs, and/or other regulated substances. These surveys would be conducted by qualified/certified personnel.

- Sampling of painted surfaces (e.g., guardrails, piping, pavement striping, and street infrastructure) for LBP would be conducted prior to any project-related disturbance.

- Sampling of appropriate facilities (e.g., pipeline insulation) would be conducted for ACMs prior to project-related disturbance. If ACMs are determined to be present, a licensed abatement contractor would be retained to remove and properly dispose of pertinent materials prior to commencing associated construction operations.

- Potentially hazardous wastes generated during project-related construction activities would be disposed of and/or recycled at appropriate facilities in conformance with associated regulatory requirements.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

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# 3.16 AIR QUALITY

## 3.16.1 Regulatory Setting

The CAA as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California CAA of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide ($NO_2$), ozone ($O_3$), particulate matter (PM), lead (Pb), and sulfur dioxide ($SO_2$).

Under the 1990 CAA Amendments, the U.S. DOT cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the State Implementation Plan (SIP; San Diego Air Pollution Control District [APCD] 2007) for achieving the goals of the CAA requirements. Conformity with the CAA takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional-level conformity in California is concerned with how well the region is meeting the standards set for CO, $NO_2$, $O_3$, and PM; California is in attainment for the other criteria pollutants. At the regional level, RTPs are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emissions budgets or other tests showing that attainment requirements of the CAA are met. If the conformity analysis is successful, the regional planning organization (such as SANDAG for San Diego County) and the appropriate federal agencies (such as the FHWA) make the determination that the RTP is in conformity with the SIP for achieving the goals of the CAA. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is "nonattainment" or "maintenance" for CO and/or PM. A region is a "nonattainment" area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or PM analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in "nonattainment" areas the project must not cause any increase in the number and severity of violations. If a known CO or PM violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

The California Air Resources Board (ARB) has established the California Ambient Air Quality Standards (CAAQS) that are generally more restrictive than the NAAQS and include additional pollutants. The federal and California air quality standards are shown in Table 3.16-1.

**Table 3.16-1**
**NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS**

| Pollutant | Averaging Time | California Standards[1] | Federal Standards[2] | |
|---|---|---|---|---|
| | | Concentration[3] | Primary[3,4] | Secondary[3,5] |
| Ozone ($O_3$) | 1-Hour | 0.09 ppm (180 µg/m$^3$) | - | Same as Primary Standard |
| | 8-Hour | 0.070 ppm (137 µg/m$^3$) | 0.075 ppm (147 µg/m$^3$) | |
| Respirable Particulate Matter ($PM_{10}$) | 24-Hour | 50 µg/m$^3$ | 150 µg/m$^3$ | Same as Primary Standard |
| | Annual Arithmetic Mean | 20 µg/m$^3$ | - | |
| Fine Particulate Matter ($PM_{2.5}$) | 24-Hour | No Separate State Standard | 35 µg/m$^3$ | Same as Primary Standard |
| | Annual Arithmetic Mean | 12 µg/m$^3$ | 15.0 µg/m$^3$ | |
| Carbon Monoxide (CO) | 8-Hour | 9.0 ppm (10 mg/m$^3$) | 9 ppm (10 mg/m$^3$) | None |
| | 1-Hour | 20 ppm (23 mg/m$^3$) | 35 ppm (40 mg/m$^3$) | |
| Nitrogen Dioxide ($NO_2$) | Annual Arithmetic Mean | 0.030 ppm (57 µg/m$^3$) | 0.053 ppm (100 µg/m$^3$) | Same as Primary Standard |
| | 1-Hour | 0.18 ppm (339 µg/m$^3$) | 0.10 ppm (188 µg/m$^3$) | |
| Sulfur Dioxide ($SO_2$) | Annual Arithmetic Mean | - | 0.030 ppm (80 µg/m$^3$) | - |
| | 24-Hour | 0.04 ppm (105 µg/m$^3$) | | - |
| | 3-Hour | - | - | 0.5 ppm (1300 µg/m$^3$) |
| | 1-Hour | 0.25 ppm (655 µg/m$^3$) | 75 ppb (196 µg/m$^3$) | - |
| Lead (Pb)[6] | 30-Day Average | 1.5 µg/m$^3$ | - | - |
| | Calendar Quarter | - | 1.5 µg/m$^3$ | Same as Primary Standard |
| | Rolling 3-Month Average | - | 0.15 µg/m$^3$ | |
| Hydrogen Sulfide ($H_2S$) | 1-Hour | 0.03 ppm (42 µg/m$^3$) | No Federal Standards | |
| Sulfates ($SO_4$) | 24-Hour | 25 µg/m$^3$ | | |

**Table 3.16-1 (cont.)**
**NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS**

| Pollutant | Averaging Time | California Standards[1] | Federal Standards[2] | |
|---|---|---|---|---|
| | | Concentration[3] | Primary[3,4] | Secondary[3,5] |
| Visibility Reducing Particles | 8-Hour | In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%. | | |
| Vinyl Chloride[6] | 24-Hour | 0.01 ppm (26 µg/$m^3$) | | |

Source: EPA-NAAQS (http://www.epa.gov/air/criteria.html); CARB-CAAQS (http://www.arb.ca.gov/research/aaqs/aaqs2.pdf). Nov. 17 2008.
Notes:
µg/$m^3$ = micrograms per cubic meter.
mg/$m^3$ = milligrams per cubic meter.
ppm = parts per million.

[1] California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—$PM_{10}$, $PM_{2.5}$, and visibility-reducing particles— are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 Torricelli. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 Torricelli; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[5] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant

[6] California ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

## 3.16.2 Affected Environment

An *Air Quality Analysis* (Scientific Resources Associated 2010) was prepared for the project and is summarized in the following sections. In addition, an *Air Quality Technical Report for Construction Emissions* was prepared for the POE and CVEF facilities, and is summarized in Section 3.16.3.

### Criteria Air Pollutants

The seven air pollutants have been identified by the USEPA as being of concern nationwide and their health effects are discussed below.

#### Carbon Monoxide

CO is a colorless and odorless gas which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the severest meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall, CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated

increasingly lower emission levels for vehicles manufactured since 1973. CO concentrations are typically higher in winter. As a result, California has required the use of oxygenated gasoline in the winter months to reduce CO emissions.

Ozone

$O_3$ is the principal component of smog and is formed in the atmosphere through a series of reactions involving reactive organic gases (ROG) and $NO_X$ in the presence of sunlight. ROG and $NO_X$ are called precursors of $O_3$. $NO_X$ includes various combinations of nitrogen and oxygen, including nitrogen oxide (NO), $NO_2$, $NO_3$, etc. $O_3$ is a principal cause of lung and eye irritation in the urban environment. Significant $O_3$ concentrations are normally produced only in the summer, when atmospheric inversions are greatest and temperatures are high. ROG and $NO_X$ emissions are both considered critical in $O_3$ formation. Control strategies for $O_3$ have focused on reducing emissions from vehicles, industrial processes using solvents and coatings, and consumer products.

Nitrogen Dioxide

$NO_2$ is a product of combustion and is generated in vehicles and in stationary sources such as power plants and boilers. $NO_2$ can cause lung damage. As noted above, $NO_2$ is part of the $NO_X$ family and is a principal contributor to $O_3$ and smog. In 2007, the ARB reduced the 1-hour average standard for $NO_2$ to 0.18 parts per million (ppm) and established a new annual standard of 0.030 ppm.

Respirable Particulate Matter

Particulate matter includes both liquid and solid particles of a wide range of sizes and composition. While some $PM_{10}$ comes from automobile exhaust, the principal source in San Diego County is dust from construction and from the action of vehicle wheels on paved and unpaved roads. In other areas, agriculture, wind-blown sand, and fireplaces can be important sources. $PM_{10}$ can cause increased respiratory disease, lung damage, and premature death. Control of $PM_{10}$ is achieved through the control of dust at construction sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads. The USEPA revised the NAAQS for $PM_{10}$ in 2006, eliminating the annual standard.

Fine Particulate Matter

The sources, health effects, and control of $PM_{2.5}$ are similar to those of $PM_{10}$. In 1997, the USEPA determined that the health effects of $PM_{2.5}$ were severe enough to warrant an additional standard, and standards for $PM_{2.5}$ became effective on September 15, 1997. The U.S. Supreme Court affirmed the standards, and policies and systems to implement these new standards. Formal attainment classifications for $PM_{2.5}$ were formally published on December 17, 2004, by the USEPA (USEPA 2004).

On June 20, 2002, the ARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by the ARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some part of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide ranging (ARB 2002). Based upon a desire to set clean air goals throughout California, the ARB created a new annual average standard for $PM_{2.5}$ at 12 micrograms per cubic meter ($\mu g/m^3$). The USEPA revised the NAAQS for $PM_{2.5}$ in 2006, reducing the 24-hour standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$.

Sulfur Dioxide

$SO_2$ is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. $SO_2$ is also a product of diesel engine combustion. The health effects of $SO_2$ include lung disease and breathing problems for asthmatics. $SO_2$ in the atmosphere contributes to the formation of acid rain. In the SDAB, there is relatively little use of coal and oil; therefore, $SO_2$ is of lesser concern than in many other parts of the country.

Lead

Lead is a stable compound that persists and accumulates both in the environment and in animals. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. The USEPA began working to reduce lead emissions soon after its inception, issuing the first reduction standards in l973, which called for a gradual phase down of lead to one tenth of a gram per gallon by 1986. The average lead content in gasoline in 1973 was 2 to 3 grams per gallon or about 200,000 tons of lead per year. In 1975, passenger cars and light trucks were manufactured with a more elaborate emission control system, which included a catalytic converter that required lead-free fuel. In 1995, leaded fuel accounted for only 0.6 percent of total gasoline sales and less than 2,000 tons of lead per year. Effective January 1, 1996, the federal CAA banned the sale of the small amount of leaded fuel that was still available in some parts of the country for use in on-road vehicles (USEPA 1996). Lead emissions have significantly decreased due to the near elimination of the use of leaded gasoline.

**Climate and Meteorology**

The project is located in the San Diego Air Basin (SDAB), which is coincident with San Diego County. The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. One of the main determinants of the climatology is a semipermanent high pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, this pressure center is located well to the north, causing storm tracks to be directed north of California. This high pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low pressure storms are brought into the region, causing widespread precipitation. The Pacific High also influences the wind patterns of California. The predominant wind directions are westerly and west-southwesterly throughout the year, and the average annual wind speed is 5.6 miles per hour (mph).

A common atmospheric condition known as a temperature inversion affects air quality in San Diego. During an inversion, air temperatures get warmer rather than cooler with increasing height. Subsidence inversions occur during the warmer months (May through October) as descending air associated with the Pacific High comes into contact with cooler marine air. The boundary between the layers of air represents a temperature inversion that traps pollutants below it. The inversion layer is approximately 2,000 feet above MSL during the months of May through October; during the remaining months (November through April), the temperature inversion is approximately 3,000 feet above MSL. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

**Regional and Local Air Quality**

The SDAB currently meets the federal standards for all criteria air pollutants, except $O_3$; and state standards for almost all criteria air pollutants. The SDAB is currently classified as a state "serious" $O_3$ nonattainment area, and a state nonattainment area for fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$) and respirable particulate matter with a diameter of 10 microns or less ($PM_{10}$), according to the California Air Resources Board (ARB; 2009a). On April 15, 2004, the EPA issued the

initial designations for the eight-hour $O_3$ standard, and the SDAB is classified as a federal nonattainment area for the eight-hour $O_3$ standard under Subpart 1 – Basic nonattainment. "Basic" is the least severe of the six degrees of $O_3$ nonattainment. The APCD submitted an air quality plan to the EPA in 2007; the plan demonstrated how the eight-hour $O_3$ standard would be attained by 2009. The SDAB is a CO attainment-maintenance area, following a 1998 re-designation as a CO attainment area.

Ambient air pollutant concentrations in the SDAB are measured at 10 air quality monitoring stations operated by the APCD. The APCD air quality monitoring station that represents the project area is the Otay Mesa Monitoring Station, shown in Figure 3.16-1, *CO Hotspot Analysis Locations and Air Quality Monitoring Stations*. This station monitors CO, $NO_2$, $O_3$, $SO_x$, and $PM_{10}$. According to the APCD, $PM_{10}$ concentrations measured at the Otay Mesa Monitoring Station are heavily influenced by the site's proximity to the truck border crossing at the U.S. - Mexico POE. To better measure $PM_{10}$ concentrations representing the Otay Mesa area as a whole, a parallel monitor was established at the Donovan Correctional Center, located two miles north of the existing monitoring station (APCD 2009). $PM_{10}$ data from this monitoring station were considered more representative of the project area. Table 3.16-2 summarizes the excesses of standards and the highest pollutant levels recorded at these stations for the years 2006 to 2008. It should be noted that the highest exceedances of the 24-hour federal $PM_{10}$ and $PM_{2.5}$ standards occurred during the southern California fire event of 2007.

**Table 3.16-2**
**AMBIENT AIR QUALITY SUMMARY**

| Pollutant Standards | 2006 | 2007 | 2008 |
|---|---|---|---|
| **Carbon Monoxide (CO)[a]** | | | |
| Maximum 1-hour concentration (ppm) | 5.1 | 5.7 | 4.3 |
| Maximum 8-hour concentration (ppm) | 3.36 | 3.39 | 3.51 |
| Number of Days Standard Exceeded | | | |
| NAAQS 1-hour (≥35 ppm) | 0 | 0 | 0 |
| CAAQS 1-hour (≥20 ppm) | 0 | 0 | 0 |
| NAAQS 8-hour (≥9 ppm) | 0 | 0 | 0 |
| CAAQS 8-hour (≥9.0 ppm) | 0 | 0 | 0 |
| **Nitrogen Dioxide ($NO_2$)[a]** | | | |
| Maximum 1-hour concentration (ppm) | 0.097 | 0.101 | 0.123 |
| Annual Average (ppm) | 0.024 | 0.022 | 0.024 |
| Number of Days Standard Exceeded | | | |
| CAAQS 1-hour | 0 | 0 | 0 |
| NAAQS 1-hour | 0 | 0 | 0 |
| **Sulfur Dioxide ($SO_X$)[a]** | | | |
| Maximum 24-hour concentration (ppm) | 0.007 | 0.009 | 0.006 |
| National annual average concentration (ppm) | 0.003 | 0.003 | 0.002 |
| Number of Days Standard Exceeded | | | |
| NAAQS 24-hour (>0.14 ppm)[b] | 0 | 0 | 0 |
| CAAQS 24-hour (>0.04 ppm) | 0 | 0 | 0 |
| **Ozone ($O_3$)[a]** | | | |
| Maximum 1-hour concentration (ppm) | 0.087 | 0.092 | 0.099 |
| Maximum 8-hour concentration (ppm) | 0.068 | 0.072 | 0.088 |
| Number of Days Standard Exceeded | | | |
| CAAQS 1-hour (>0.09 ppm) | 0 | 0 | 2 |
| CAAQS 8-hour (>0.070 ppm) | 0 | 1 | 3 |
| NAAQS 8-hour (>0.075 ppm) | 0 | 0 | 2 |

**Table 3.16-2 (cont.)**
**AMBIENT AIR QUALITY SUMMARY**

| Pollutant Standards | 2006 | 2007 | 2008 |
|---|---|---|---|
| **Particulate Matter ($PM_{10}$)**[c,d] | | | |
| National maximum 24-hour concentration ($\mu g/m^3$) | 75 | 170 | 99 |
| National second highest 24-hour concentration ($\mu g/m^3$) | 56 | 146 | 79 |
| State maximum 24-hour concentration ($\mu g/m^3$) | 75 | 170 | 99 |
| State second highest 24-hour concentration ($\mu g/m^3$) | 56 | 146 | 79 |
| National[e] annual average concentration ($\mu g/m^3$) | 21.1 | 34.2 | 30.8 |
| State[f] annual average concentration ($\mu g/m^3$) | N/A | 36.6 | 31.2 |
| Number of Days Standard Exceeded | | | |
| NAAQS 24-hour (>150 $\mu g/m^3$) | 0 | 1 | 0 |
| CAAQS 24-hour (>50 $\mu g/m^3$) | 3 | 10 | 8 |
| **Particulate Matter ($PM_{2.5}$)**[g] | | | |
| Maximum 24-hour concentration ($\mu g/m^3$) | 30.2 | 77.8 | 32.9 |
| Second highest 24-hour concentration ($\mu g/m^3$) | 25.0 | 45.7 | 29.5 |
| Third highest 24-hour concentration ($\mu g/m^3$) | 24.0 | 36.1 | 28.4 |
| Fourth highest 24-hour concentration ($\mu g/m^3$) | 22.6 | 32.3 | 26.5 |
| National[e] annual average concentration ($\mu g/m^3$) | 11.2 | 12.6 | 12.3 |
| State[f] annual average concentration ($\mu g/m^3$) | 11.2 | * | 12.3 |
| Number of Days Standard Exceeded | | | |
| NAAQS 24-hour (>65 $\mu g/m^3$) | 1 | 0 | 0 |

* Data unavailable
a Monitoring data from Otay Mesa Monitoring Station.
b This standard was revoked on August 23, 2010.
c Measurements usually collected every six days.
d Monitoring data from Donovan Correctional Center Monitoring Station.
e National annual average based on arithmetic mean.
f State annual average based on geometric mean.
g Monitoring data from Chula Vista Monitoring Station.
$\mu g/m^3$ = micrograms per cubic meter
Source: ARB 2009; EPA 2009b

## Sensitive Receptors

Sensitive receptors are typically defined as schools, hospitals, nursing homes, and day care centers. Based on Table 3.16-3, no sensitive receptors have been identified within one mile of the SR-11 corridor.

**Table 3.16-3**
**SENSITIVE RECEPTORS IN PROJECT AREA**

| Name | Address | City | Distance (Miles) |
|---|---|---|---|
| **Schools** | | | |
| Olympian High School | 1925 Magdalena Avenue | Chula Vista | 2.67 |
| Wolf Canyon Elementary School | 1950 Wolf Canyon Loop | Chula Vista | 3.04 |
| San Ysidro High School | 5353 Airway Road | San Diego | 1.86 |
| **Preschools** | | | |
| Concordia Preschool and Child Care Center | 1695 Discovery Falls Drive | Chula Vista | 4.43 |
| San Ysidro Head Start | 249 Willow Road | San Ysidro | 3.42 |
| **University/College** | | | |
| Southwestern College[1] | 8100 Gigantic | San Diego | 0.04 |

**Table 3.16-3 (cont.)**
**SENSITIVE RECEPTORS IN PROJECT AREA**

| Name | Address | City | Distance (Miles) |
|---|---|---|---|
| **Hospital/Nursing Home Facilities** | | | |
| Sharp Chula Vista Medical Center | 751 Medical Center Court | Chula Vista | 4.66 |
| **Parks** | | | |
| Otay Lakes County Park | 2270 Wueste Road | Chula Vista | 3.61 |
| Valle Lindo Park | Sequoia Street | Chula Vista | 3.85 |

[1] Although Southwestern College is an educational facility, colleges are not typically considered sensitive receptors because they cater to adults rather than children who have a more sensitive respiratory system.
Source: Scientific Resources Associated 2010

## 3.16.3 Environmental Consequences

### Build Alternatives and Variations

Permanent and temporary air quality impacts associated with the Two Interchange, One Interchange, and No Interchange alternatives, as well as the different variations presented in Chapter 2.0, would be similar for most air quality issues, because the build alternatives would occur in the same location with very similar footprints and sensitive receptors would be within similar distances from proposed improvements. The following assessment characterizes all three build alternatives and their potential variations, with differences noted, where appropriate.

Regional Air Quality Conformity

The CAA requires a demonstration that federal actions conform to the SIP and similar approved plans in areas that are designated as nonattainment. Transportation measures, such as the proposed project, are analyzed for conformity as part of the RTP and RTIP. The RTIP is the implementing document for the RTP. If the design concept and scope of a proposed transportation project are consistent with the project description in the applicable RTP and RTIP, including the assumptions in the regional emissions analysis for the RTP and RTIP, then the project would conform to the SIP, and no adverse regional air quality impact would occur as a result of the project.

The applicable transportation plans for the proposed project are the 2030 RTP, adopted on November 30, 2007 (SANDAG 2007a), as well as the Final 2008 RTIP, through Amendment 14. The 2008 RTIP was adopted by SANDAG on July 25, 2008 (SANDAG 2008). The U.S. DOT made a finding of conformity for the 2008 RTIP and a conformity redetermination for the 2030 RTP on November 17, 2008 (U.S. DOT 2008). The project is included in Table A.2, Phased Highway Projects – Revenue Constrained Plan, on page A-9 of the 2030 San Diego RTP, as SR-11 from SR-905 to Mexico. The project is also included in Table A.6, Major Capital Improvements – Reasonably Expected Revenue Scenario, under Highway System Completion (page A-20).

The project is listed on page 274 of the original 2008 RTIP under project listings, on page 3 of Amendment 2 to the 2008 RTIP. The project is identified as CAL66, RTIP #08-02, SR-11 from Border of Mexico east of SR-905/Otay Mesa Border Crossing to Future SR-125/SR-905 junction (EA NO: 05631; PPNO: 0999). The 2008 RTIP, as amended, was last found to conform by FHWA and FTA through Amendment 15 on November 24, 2009. A difference exists regarding the description in the 2008 RTIP and the limits that are being proposed. In order to accommodate the connection of SR-11 with SR-905 and avoid conflicts with the SR-905/La Media Road Interchange, lanes would be added between the SR-905/SR-125/SR-11 Interchange and Britannia Boulevard. It is anticipated that this change will be

reflected in the February 2011 amendment to the 2010 RTIP, and as a result the project will be consistent with the RTIP and the associated regional conformity analysis.

Local Air Quality Conformity

*Carbon Monoxide Impacts*

The Transportation Conformity Rules require a statement that "federal projects must not cause or contribute to any new localized CO violations or increase the frequency or severity of any existing CO violations in CO nonattainment and maintenance areas." The CO portion of the requirement applies to the proposed project because the SDAB is a federal CO maintenance area. The air quality analyses of projects included in the RTP and RTIP do not include the analyses of local CO impacts; these must be addressed on a project level.

Procedures and guidelines for use in evaluating the potential local-level CO impacts of a project are contained in Transportation Project-Level Carbon Monoxide Protocol (Protocol; University of Davis 1997). The Protocol provides a methodology for determining the level of analysis, if any, required on a project.

The SDAB was redesignated as a CO attainment area subsequent to the passage of the 1990 federal CAA amendments. Continued attainment has been verified with the APCD. In areas meeting those conditions, in accordance with the Protocol, only projects that are likely to worsen air quality necessitate further analysis. Projects that worsen air quality are defined as those that substantially increase the percentage of vehicles in cold start mode, defined as an increase in the number of vehicles operating in cold start mode of two percent or more; those that substantially increase traffic volumes, defined as an increase in volume in excess of five percent; and those that worsen traffic flow, defined for intersections as increasing average delay at signalized intersections operating at LOS E or F. The proposed project is not exempt from further analysis because the project would degrade some analyzed intersections to LOS E or F in the horizon year (2030). It is assumed that the traffic conditions for the 2035 Horizon Year analyzed in the *Tier II Traffic Technical Report* (Traffic Report; VRPA 2010a) would be representative of 2030 conditions that are applied in the CO hot spot model; this would result in a "worst case" analysis because it likely assumes a higher traffic volume than would occur in 2030. The year 2030 was used to evaluate air quality impacts because the RTP addresses buildout for transportation in the SDAB for the year 2030. To be consistent with the RTP, it is appropriate to use the year 2030 to evaluate the potential for air quality impacts.

A summary of the forecast LOS for project-affected intersections (i.e., those intersections operating at LOS E or F for any project alternative) is provided in Section 3.8, Traffic and Transportation/Pedestrian and Bicycle Facilities.

As required by the Protocol, a detailed CO concentration analysis was conducted using EMFAC2007 and CALINE4 models for the following intersections using 2030 conditions under the No Build Alternative and all build alternatives:

- Otay Mesa Road/La Media Road
- La Media Road/SR-905 WB off-ramp
- Siempre Viva Road/SR-905 NB ramps
- Siempre Viva Road/Paseo de las Americas
- Siempre Viva Road/Enrico Fermi Drive

Figure 3.16-1 shows the receptor locations. According to the Traffic Report, while other intersections in the area may also operate at LOS E or F, they would operate more efficiently with the proposed project

than without (i.e., less delay time at intersections), which would represent a decrease in the potential for harmful build-up of CO at project intersections.

The eight-hour average maximum CO concentration was calculated by applying a persistence factor of 0.7 to the predicted one-hour average maximum CO concentrations obtained from each modeled run. The background concentrations were then added to the predicted concentrations to calculate the modeled maximum CO concentrations, which were then compared to the CAAQS and NAAQS in order to determine if the project would result in any exceedances.

The CO analysis indicated that the proposed project future traffic conditions would not result in an exceedance of the CO standards (Table 3.16-4*)*.

**Table 3.16-4**
**CO CONCENTRATIONS 2030**
**(1-Hour and 8-Hour Concentrations plus background, ppm)**

| Intersection Number/Location | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|
| | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| **1-Hour CO Concentrations (background = 5.7 ppm)** | | | | | | | | |
| 1. Otay Mesa Road and La Media Road | 6.5 | 6.6 | 6.5 | 6.6 | 6.7 | 6.5 | 6.6 | 6.7 |
| 2. SR-905 La Media Road WB off-ramp | 6.4 | 6.5 | 6.4 | 6.5 | 6.4 | 6.5 | 6.5 | 6.6 |
| 3. Siempre Viva Road and SR-905 NB ramps | 6.8 | 6.9 | 6.7 | 6.8 | 6.8 | 6.9 | 6.9 | 7.0 |
| 4. Siempre Viva Road and Paseo de las Americas | 6.6 | 6.7 | 6.5 | 6.5 | 6.5 | 6.6 | 6.8 | 6.9 |
| 5. Siempre Viva Road and Enrico Fermi Drive | 6.3 | 6.3 | 6.2 | 6.2 | 6.2 | 6.3 | 6.5 | 6.5 |
| Federal standard | 35 | | | | | | | |
| State standard | 20 | | | | | | | |
| **8-Hour Concentrations[1] (background = 3.51 ppm)** | | | | | | | | |
| 1. Otay Mesa Road and La Media Road | 4.07 | 4.14 | 4.07 | 4.14 | 4.21 | 4.07 | 4.14 | 4.21 |
| 2. SR-905 La Media Road WB off-ramp | 4.00 | 4.07 | 4.00 | 4.07 | 4.00 | 4.07 | 4.07 | 4.14 |
| 3. Siempre Viva Road and SR-905 NB ramps | 4.28 | 4.35 | 4.21 | 4.28 | 4.28 | 4.35 | 4.35 | 4.42 |
| 4. Siempre Viva Road and Paseo de las Americas | 4.13 | 4.21 | 4.07 | 4.07 | 4.07 | 4.14 | 4.28 | 4.35 |
| 5. Siempre Viva Road and Enrico Fermi Drive | 3.93 | 3.93 | 3.86 | 3.93 | 3.86 | 3.93 | 4.07 | 4.07 |
| Federal standard | 9 | | | | | | | |
| State standard | 9.0 | | | | | | | |

[1] 8-hour concentrations are extrapolated based on a 0.7 persistence factor.
Source: Scientific Resources Associated 2010

The federal and state one-hour CO standards are 35 parts per million (ppm) and 20 ppm, respectively, and the federal and state eight-hour CO standards are 9 ppm and 9.0 ppm, respectively. As shown in Table 3.16-4, the proposed project's future traffic conditions would not lead to any exceedances of these thresholds during the AM or PM peak periods at any of the analyzed intersections under any of the project alternatives. All other intersections in the project area are predicted to experience less delay time and improved operating conditions with the project alternatives, compared with the No Build Alternative. Therefore, the proposed project would not result in or contribute to any significant local air quality impacts due to future operations.

*Particulate Matter Impacts*

On March 10, 2006, the EPA published a final rule that establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed for local air quality

impacts in $PM_{2.5}$ and $PM_{10}$ nonattainment and maintenance areas. Based on that rule, the EPA and FHWA published Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and $PM_{10}$ Nonattainment and Maintenance Areas (PM Guidance; FHWA 2006a). While the SDAB is not a federally designated $PM_{2.5}$ or $PM_{10}$ nonattainment or maintenance area, it is designated as a state nonattainment area for both pollutants. Thus, to meet state requirements, the proposed project has been assessed using the procedure outlined in the PM Guidance.

To meet statutory requirements, the March 10, 2006 final rule requires $PM_{2.5}$ and $PM_{10}$ hot spot analyses to be performed for projects of air quality concern (POAQC). Qualitative hot spot analyses would be done for these projects. Projects not identified as POAQC are considered to meet statutory requirements without any further hot spot analyses.

Pursuant to 40 CFR 93.123(b)(i) and (ii), a new or expanded highway or expressway project would be considered a POAQC if it resulted in both a significant Annual Average Daily Traffic (AADT) volume (AADT volume of 125,000 or more), and a significant number of diesel vehicles (defined as 8 percent or more of that total AADT). Based on screening using PM Guidance, the proposed project is not a POAQC because it does not meet the criteria, due to relatively low total Annual Average Daily Traffic (AADT), comparing the Build Alternatives and No Build Alternative. The percentage of diesel-fueled trucks within the project limits is forecast to be 15 percent of AADT, which exceeds the threshold of 8 percent. Based on the Traffic Report (VRPA 2010a), however, no alternative would result in an AADT volume of 125,000 or more. The highest AADT for any segment of SR-11 is 62,600 on the segment from the interchange with SR-905 to the interchange with Enrico Fermi Drive for the Two Interchange Alternative. Because the project does not meet the criteria to be considered a POAQC, the project would be in conformance with federal $PM_{10}$ and $PM_{2.5}$ standards.

Table 3.16-5 shows the $PM_{10}$ and $PM_{2.5}$ concentrations observed at the Donovan Correctional Center Monitoring Station from 2006 through 2008, in comparison with federal and state standards. It should be noted that the highest concentrations were measured during the southern California fire events in 2007.

**Table 3.16-5**
**$PM_{10}$ AND $PM_{2.5}$ TRENDS AT THE DONOVAN CORRECTIONAL CENTER MONITORING STATION**

| Pollutant | Averaging Time | Federal Primary Standards | California Air Quality Standards | Maximum Concentrations, µg/m$^3$ | | |
|---|---|---|---|---|---|---|
| | | | | 2006 | 2007 | 2008 |
| $PM_{10}$ | 24 hours | 150 µg/m$^3$ | 50 µg/m$^3$ | 75 | 170 | 99 |
| | Annual | Revoked | 20 µg/m$^3$ | 21.1 | 34.2 | 30.8 |
| $PM_{2.5}$ | 24 hours | 35 µg/m$^3$ | none | 30.2 | 77.8 | 32.9 |
| | Annual | 15 µg/m$^3$ | 12 µg/m$^3$ | 11.2 | 12.6 | 12.3 |

Source: Scientific Resources Associated 2010

*Mobile Source Air Toxics Impacts*

The EPA is the lead Federal Agency for administering the CAA and has certain responsibilities regarding the health effects of mobile source air toxics (MSATs). The EPA regulates 188 air toxics, known as hazardous air pollutants, under the CAA and has identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (http://cfcpub.epa.gov/ncea/iris/index.cfm). In addition, the EPA has identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA): acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and

polycyclic organic matter. While FHWA considers these the priority MSATs, the list is subject to change and may be adjusted in consideration of future EPA rules.

The 2007 EPA rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, Page 8430, February 20, 2007) requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using the EPA's MOBILE6.2 model, even if vehicle activity (vehicle miles travelled; VMT) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSATs is projected from 1999 to 2050.

Incomplete or Unavailable Information for Project Specific MSAT Impact Analysis: In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives, particularly when considered over a lifetime (i.e., 70 years) because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that timeframe.

Existing estimates of toxicity of the various MSATs present considerable uncertainties because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by Health Effects Institute (2007). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA and the Health Effects Institute have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also a lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA to determine whether more stringent controls are required in order to provide an ample margin of safety. The first step in the decision framework requires the EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

This document provides a qualitative assessment of MSAT emissions relative to the various alternatives and acknowledges that any of the project alternatives may result in increased exposure to MSAT emissions in certain locations.

Evaluation of Project MSAT Impacts. A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled A Methodology for Evaluating Mobile Source Air Toxics Emissions Among Transportation Project Alternatives, found at www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm.

The amount of MSATs emitted would be proportional to VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the Build Alternatives is slightly higher than that for the No Build Alternative because the additional capacity would increase the efficiency of the roadway and could attract rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase would be offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel PM decrease as speed increases. The extent to which these speed-related emissions decreases would offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

The proposed project falls under Level 2, qualitative analysis projects with low potential MSAT effects. The types of projects included under Level 2 include those projects that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions.

As described above, emission factors for five of the seven priority MSATs (acrolein, benzene, 1,3-butadiene, formaldehyde, and diesel particulate matter) have been obtained for the SDAB using CT-EMFAC V2.6. CT-EMFAC model runs were conducted based on the assumption in the Traffic Report that diesel truck traffic would comprise 15 percent of traffic on SR-11. CT-EMFAC V2.6 does not calculate emissions of the remaining two priority MSATs, naphthalene and polycyclic organic matter (POM). Based on information from the EPA on POM (http://www.epa.gov/ttn/atw/hlthef/polycycl.html), POM includes a broad class of compounds that includes the PAHs, of which benzo(a)pyrene is a member. The EPA has identified seven PAHs as probable human carcinogens: benzo(a)pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The ARB does not provide speciation profiles for POM for vehicles, nor does it provide speciation profiles for the seven PAHs identified as probable human carcinogens. However, according to the ARB, one class of compounds typically present on diesel PM is polycyclic aromatic hydrocarbons (http://www.arb.ca.gov/research/diesel/dpm_health_fs.pdf). Because the majority of both naphthalene and POM emissions would be from diesel vehicles, and because diesel vehicles are assumed to make up 15 percent of the vehicles traveling on SR-11, naphthalene and POM were not evaluated separately from diesel PM.

Because existing conditions and the No Build Alternative do not involve construction of SR-11, it is not possible to compare existing MSAT emissions or MSAT emissions for the No Build Alternative with MSAT emissions with the proposed build alternatives. Results of the 2015 and 2030 analyses are shown in Table 3.16-6.

**Table 3.16-6**
**TOTAL MSAT EMISSIONS FOR 2015 AND 2030**

| Alternative | Variation | Segment | Emissions, grams/day | | | | |
|---|---|---|---|---|---|---|---|
| | | | Diesel PM | Formaldehyde | 1,3-Butadiene | Benzene | Acrolein |
| Two Interchange Alternative | No Toll | 2015 Total | 888.46 | 220.85 | 49.32 | 245.62 | 11.52 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 1,227.25 | 221.31 | 58.8 | 297.32 | 14.11 |
| | | 2030 Per VMT | 0.00812 | 0.00118 | 0.00039 | 0.00197 | 0.00009 |
| | | % Reduction per VMT | 37.62 | 54.75 | 46.16 | 45.34 | 44.69 |
| | Toll | 2015 Total | 780.91 | 194.1 | 43.34 | 215.88 | 10.14 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 1,131.39 | 204.45 | 54.37 | 274.67 | 13.04 |
| | | 2030 Per VMT | 0.00816 | 0.00147 | 0.00039 | 0.00198 | 0.00009 |
| | | % Reduction per VMT | 37.33 | 54.44 | 45.73 | 44.96 | 44.37 |
| | Toll (SR-125 Connector) | 2015 Total | 2160.72 | 537.07 | 119.93 | 597.34 | 28.04 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 2916.55 | 528.05 | 140.28 | 710.4 | 33.67 |
| | | 2030 Per VMT | 0.00984 | 0.00178 | 0.00047 | 0.00240 | 0.00011 |
| | | % Reduction per VMT | 24.45 | 44.97 | 34.53 | 33.43 | 32.79 |
| | No Toll (Siempre Viva Road Full Interchange) | 2015 Total | 2274.71 | 565.41 | 125.94 | 574.83 | 29.51 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00329 | 0.00017 |
| | | 2030 Total | 2838.75 | 513.47 | 136.13 | 624.86 | 32.74 |
| | | 2030 Per VMT | 0.00814 | 0.00147 | 0.00039 | 0.00179 | 0.000094 |
| | | % Reduction per VMT | 37.52 | 54.53 | 45.88 | 45.58 | 44.45 |
| | Toll (Siempre Viva Road Full Interchange) | 2015 Total | 2130.31 | 529.52 | 117.94 | 538.34 | 27.65 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00329 | 0.00017 |
| | | 2030 Total | 2726.96 | 492.79 | 130.57 | 599.38 | 31.4 |
| | | 2030 Per VMT | 0.00812 | 0.00147 | 0.00039 | 0.00178 | 0.000094 |
| | | % Reduction per VMT | 37.66 | 54.68 | 46.09 | 45.78 | 44.70 |
| One Interchange Alternative | No Toll | 2015 Total | 855.43 | 212.53 | 47.46 | 236.37 | 11.1 |
| | | 2015 Per VMT | 0.01303 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 1,078.85 | 195.5 | 52.05 | 262.63 | 12.49 |
| | | 2030 Per VMT | 0.00821 | 0.00149 | 0.00040 | 0.00200 | 0.00010 |
| | | % Reduction per VMT | 37.02 | 54.06 | 45.23 | 44.51 | 43.81 |
| | Toll | 2015 Total | 754.33 | 187.5 | 41.87 | 208.54 | 9.79 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 983.94 | 178.3 | 47.47 | 239.53 | 11.39 |
| | | 2030 Per VMT | 0.00821 | 0.00149 | 0.00040 | 0.00200 | 0.00009 |
| | | % Reduction per VMT | 36.99 | 54.06 | 45.23 | 44.51 | 43.80 |
| | Toll (SR-125 Connector) | 2015 Total | 844.42 | 209.89 | 46.87 | 233.45 | 10.96 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 1,056.16 | 191.38 | 50.95 | 257.11 | 12.22 |
| | | 2030 Per VMT | 0.00821 | 0.00149 | 0.00040 | 0.00200 | 0.00009 |
| | | % Reduction per VMT | 36.99 | 54.06 | 45.24 | 44.52 | 43.83 |
| No Interchange Alternative | No Toll | 2015 Total | 951.8 | 236.58 | 52.83 | 263.13 | 12.35 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 1,020.56 | 184.93 | 49.24 | 248.44 | 11.81 |
| | | 2030 Per VMT | 0.00821 | 0.00149 | 0.00040 | 0.00200 | 0.00009 |
| | | % Reduction per VMT | 36.99 | 54.06 | 45.23 | 44.51 | 43.80 |
| | Toll | 2015 Total | 826.69 | 205.48 | 45.89 | 228.54 | 10.73 |
| | | 2015 Per VMT | 0.01302 | 0.00324 | 0.00072 | 0.00360 | 0.00017 |
| | | 2030 Total | 874.4 | 158.45 | 42.19 | 212.86 | 10.12 |
| | | 2030 Per VMT | 0.00821 | 0.00149 | 0.00040 | 0.00200 | 0.00009 |
| | | % Reduction per VMT | 36.99 | 54.06 | 45.23 | 44.51 | 43.81 |

Source: Scientific Resources Associated 2010

Based on Table 3.16-6, differences in MSAT emissions between build alternatives would not be substantial. For the year 2015, the Two Interchange Alternative with no toll and the Siempre Viva Road Full Interchange Variation would have the highest MSAT emissions among the build alternatives. The lowest MSAT emissions would result from the One Interchange Alternative with the toll. For the year 2030, the Two Interchange Alternative with a toll and the SR-125 Connector Variation would have the highest MSAT emissions among the alternatives. The lowest MSAT emissions in 2030 would result from the No Interchange Alternative with the toll.

As shown in the table, a significant decrease in MSAT emissions can be expected for the proposed alternatives from 2015 through 2030 on a VMT basis. This decrease is prevalent throughout the highest-priority MSATs and the analyzed alternatives, regardless of the difference in mainline configurations. This decrease also is consistent with the aforementioned EPA's study that projects a significant reduction in on-highway emissions of benzene, formaldehyde, and 1,3-butadiene between 2000 and 2020. According to the result of analysis shown in Table 3.16-6, reductions in existing MSAT emission rates per VMT expected between 2015 and 2030 are between 24 and 38 percent of diesel PM, 33 and 46 percent of benzene, 35 and 46 percent of 1,3-butadiene, 33 and 45 percent of acrolein, and 33 and 55 percent of formaldehyde, depending on the build alternatives that is implemented.

The build alternatives would substantially relieve congestion in the Otay Mesa region over existing conditions, resulting in an overall reduction in MSAT emissions in the region. There are sensitive land uses (commercial and industrial) within 500 feet of the nearest lane affected by such emissions. Therefore, reduced emissions would benefit those land uses adjacent to the freeway.

Regardless of the alternative chosen, emissions would likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. The magnitude of the EPA-projected reductions, however, is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

Asbestos Impacts

There will be no demolition or renovation of existing buildings and bridges; therefore, airborne asbestos would not be a concern within the project limits.

According to the report "A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos" (CDC 2000), in the coastal portion of San Diego County, NOA is not typically found in the geological formations present at the proposed project site (CDC 2000). Thus, hazardous exposure to asbestos-containing serpentine materials would not be a concern with the proposed project.

Construction Impacts

*State Route 11*

Regional Emissions. The principal criteria pollutants emitted during construction of SR-11 would be $PM_{10}$ and $PM_{2.5}$. The source of the pollutants would be fugitive[1] dust created during clearing, grubbing, excavation, and grading; demolition of structures and pavement; vehicle travel on paved and unpaved

[1] "Fugitive" is a term used in air quality analysis to denote emission sources that are not confined to stacks, vents, or similar paths.

roads; and material blown from unprotected graded areas, stockpiles, and haul trucks. Generally, the distance that particles drift from their source depends on their size, emission height, and wind speed. About 50 percent of fugitive dust is made up of relatively large particles, greater than 100 microns in diameter. These particles are responsible for the reduced visibility often associated with construction, as well as the nuisance caused by the deposition of dust on vehicles, and in exterior areas used by people for recreation and business. Given their relatively large size, these particles tend to settle within 20 to 30 feet of their source. Small particles, less than 100 microns in diameter, can travel nearly 330 feet before settling to the ground, depending on wind speed. These smaller particles also contribute to visibility and nuisance impacts, and include $PM_{10}$ and $PM_{2.5}$, which are potential health hazards.

An additional important source of pollutants during construction would be the engine exhaust from construction equipment. The principal pollutants of concern would be $NO_X$ and reactive organic gas emissions that would contribute to the formation of $O_3$, which is a regional nonattainment pollutant.

Federal conformity regulations require analysis of construction impacts for projects when construction activities would last for more than five years. The SR-11 would be completed in 2015 and last less than five years; therefore, no quantitative estimates of regional construction emissions have been made. It is, however, recommended that specific measures to control dust and particulates be incorporated into project specifications (see Section 3.16.5, *Avoidance, Minimization, and Mitigation Measures*).

Local Emissions. According to 40 CFR Section 93.123(5), CO, $PM_{10}$, and $PM_{2.5}$ hot spot analyses are not required for construction-related activities that create a temporary increase in air emissions. Temporary is defined as increases that only occur during a construction phase and last five years or less at any individual site. The construction phase of the proposed project would last for approximately two to three years and would be considered temporary. Thus, no local hot spot is anticipated and a hot spot analysis is not required for construction of the proposed project.

Diesel particulate emissions may be a potential concern. While there is no formal guidance for impact analysis, potential adverse impacts would be increased if construction equipment and truck staging areas were to be located near schools, active recreation areas, or areas of higher population density. The nearest school to the project, San Ysidro High School, is approximately two miles from the SR-11 alignment, which would represent a potential impact.[2]

During construction, diesel equipment operating at the site could generate some nuisance odors; however, due to the distance from existing sensitive receptors to the project site and the temporary nature of construction, this impact would not be substantial. Operation of the project would not involve any uses or activities that would be expected to result in objectionable odors.

Otay Mesa East Port of Entry and Commercial Vehicle Enforcement Facility

The POE and CVEF facilities subject to general conformity would be constructed in over a period of approximately two years. Construction is estimated to take 24 to 30 months and would be completed in 2015. During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities. Emissions from construction equipment also are anticipated and would include CO, nitrogen oxides (NOx), VOCs, directly-emitted particulate matter ($PM_{10}$ and $PM_{2.5}$), and toxic air contaminants such as diesel exhaust particulate matter. $O_3$ is a pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

[2] While Southwestern College is an educational facility and is located nearer the proposed project than is San Ysidro High School, colleges are not typically considered sensitive receptors because they cater to adults rather than children, who have a more sensitive respiratory system.

Construction-related effects on air quality would be greatest during site preparation because most engine emissions are associated with the excavation, handling, and transport of soils to and from the construction site(s). If not properly controlled, these activities would temporarily generate $PM_{10}$, $PM_{2.5}$, and small amounts of CO, $SO_2$, NOx, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site(s) and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. $PM_{10}$ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. $PM_{10}$ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

In addition to dust-related $PM_{10}$ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, $SO_2$, NOx, VOCs, and some soot particulate ($PM_{10}$ and $PM_{2.5}$) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site(s).

The *Air Quality Technical Report for Construction Emissions* (Caltrans 2010d) evaluated construction emissions by comparing projected annual construction emissions of the POE structures with de minimis thresholds established under 40 CFR Part 93, the General Conformity Rule, which applies to federal projects in nonattainment areas. As stated earlier, the SDAB is currently considered a nonattainment area for $O_3$ and a maintenance area for CO. The de minimus thresholds for $O_3$ precursors (NOx and VOCs) and CO are 100 tons per year.

Annual emissions for the construction phase would be below the de minimis thresholds for all pollutants (i.e., 100 tons per year) during construction of the POE facilities, as shown in Table 3.16-7. No associated adverse impacts would occur during construction of the project.

**Table 3.16-7**
**ESTIMATED CONSTRUCTION EMISSIONS**

| Emission Source | CO | ROC | $NO_x$ | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| **Tons/Year** | | | | | | |
| *Phase I* | | | | | | |
| Site Grading Fugitive Dust | - | - | - | - | 4.88 | 1.02 |
| Earthmoving Fugitive Dust | - | - | - | - | 9.59 | 1.17 |
| Heavy Construction Equipment | 24.55 | 6.98 | 44.73 | 0.05 | 3.04 | 2.71 |
| Worker Travel – Vehicle Emissions | 4.86 | 0.23 | 0.45 | 0.01 | 0.06 | 0.03 |
| Construction Truck Emissions | 10.43 | 2.17 | 29.32 | 0.04 | 1.29 | 1.11 |
| **TOTAL** | **39.84** | **9.29** | **74.50** | **0.10** | **18.86** | **6.04** |
| Significance Criteria | 100 | 50 | 100 | 100 | 100 | 55 |
| *Significant?* | *No* | *No* | *No* | *No* | *No* | *No* |

Source: Scientific Resources Associated 2010

**No Build Alternative**

To the extent that the build alternatives are anticipated to reduce delay time and improve operating conditions in the region, these benefits would not be realized under the No Build Alternative.

The No Build Alternative would not result in MSAT emissions in the immediate vicinity of the proposed corridor and would result in slightly less VMT. However, reductions in regional congestion that would contribute to higher speeds and a resultant regional reduction in MSAT emissions similarly would not be realized under the No Build Alternative.

Unlike the build alternatives, no construction-related emissions would occur under the No Build Alternative.

### 3.16.4 Avoidance, Minimization, and/or Mitigation Measures

**Build Alternatives and Variations**

The following typical Caltrans practices to be employed during project construction would minimize the emission of fugitive dust, $PM_{10}$, $PM_{2.5}$ and deisel:

- 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
- Stabilize the surface of inactive stockpiles
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads
- Minimize unnecessary vehicular and machinery activities
- Street sweeping should be conducted where sediment is tracked from the job site onto paved roads, and should be performed immediately after soil-disturbing activities occur or off-site tracking of material is observed
- Revegetate disturbed land, including vehicular paths created during construction, to avoid future off-road vehicular activities
- 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 to minimize exposure to diesel particulates
- Use low-emission on-site mobile construction equipment where feasible
- Maintain equipment in tune per manufacturer's specifications
- Retard diesel engine injection timing by two to four degrees unless not recommended by manufacturer (due to lower emission output in-place)
- Use reformulated, low-emission diesel fuel
- Substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible
- Use catalytic converters on gasoline-powered equipment
- Do not leave inactive construction equipment idling for prolonged periods

**No Build Alternative**

Because no project action would occur under the No Build Alternative, no associated avoidance, minimization, or mitigation measures would be required.

### 3.16.5 Climate Change

Climate change is analyzed in Section 4.7. Neither EPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Although analysis of greenhouse gas emissions at the project level is not particularly meaningful or informative, addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in the CEQA chapter of this environmental document and may be used to inform the NEPA decision. FHWA's efforts in reducing GHG emissions include identification of California SB 375 furthering those goals. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

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**LEGEND**

- #: Intersections Modeled for CO Hotspots (Refer to Table 3.16-3 for numbers)
- Ambient Air Quality Monitoring Stations
- Maximum Limits of Project Alternatives and Variations

Donovan Monitoring Station (Richard J. Donovan Correctional Facility)

HARVEST ROAD

ALTA ROAD

OTAY MESA ROAD

1

2

SR-905 (UNDER CONSTRUCTION)

AIRWAY ROAD

AIRWAY ROAD

BRITANNIA BOULEVARD

LA MEDIA ROAD

3

4

SIEMPRE VIVA ROAD

SIEMPRE VIVA ROAD

5

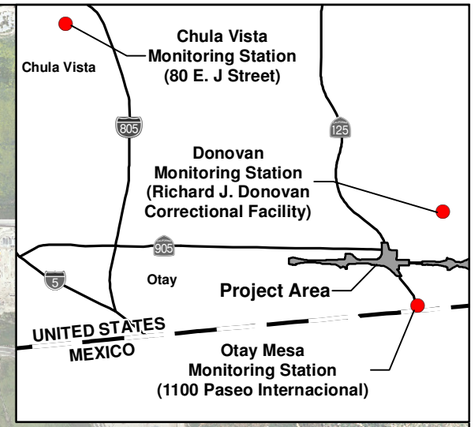
VIA DE LA AMISTAD

ENRICO FERMI DRIVE

UNITED STATES

MEXICO

Otay Mesa Monitoring Station (1100 Paseo Internacional)

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# CO Hotspot Analysis Locations and Air Quality Monitoring Stations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.16-1

# 3.17 NOISE

## 3.17.1 Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

### California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible. The rest of this section will focus on the NEPA-23 CFR 772 noise analysis; please see Chapter 4.0 of this document for further information on noise analysis under CEQA.

### National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain NAC that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

| Activity Category | NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$ | Description of Activities |
|---|---|---|
| A | 57 Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose |
| B | 67 Exterior | Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals. |
| C | 72 Exterior | Developed lands, properties, or activities not included in Categories A or B above |
| D | – | Undeveloped lands |
| E | 52 Interior | Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums |

Table 3.17-1 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

**Table 3.17-1**
**NOISE LEVELS OF COMMON ACTIVITIES**

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|---|---|
| | 110 | Rock Band |
| Jet Fly-over at 300m (1000 ft) | | |
| | 100 | |
| Gas Lawn Mower at 1 m (3 ft) | | |
| | 90 | |
| Diesel Truck at 15 m (50 ft), at 80 km (50 mph) | | Food Blender at 1 m (3 ft) |
| | 80 | Garbage Disposal at 1 m (3 ft) |
| Noisy Urban Area, Daytime | | |
| Gas Lawn Mower, 30 m (100 ft) | 70 | Vacuum Cleaner at 3 m (10 ft) |
| Commercial Area | | Normal Speech at 1 m (3 ft) |
| Heavy Traffic at 90 m (300 ft) | 60 | |
| | | Large Business Office |
| Quiet Urban Daytime | 50 | Dishwasher Next Room |
| Quiet Urban Nighttime | 40 | Theater, Large Conference Room (Background) |
| Quiet Suburban Nighttime | | |
| | 30 | Library |
| Quiet Rural Nighttime | | Bedroom at Night, Concert Hall (Background) |
| | 20 | Broadcast/Recording Studio |
| | 10 | |
| Lowest Threshold of Human Hearing | 0 | Lowest Threshold of Human Hearing |

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006* (2006c), a noise impact occurs when the future noise level with the project results in a substantial increase in the noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within one dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

If undeveloped lands are *planned, designed and programmed (i.e.,* all final discretionary approvals received from the local jurisdiction) before the final project approval under NEPA or CEQA, noise abatement must be considered as part of the transportation project. Undeveloped land adjacent to highway R/W that is planned, designed and programmed after the final project approval is considered an Activity Category D land use. Noise abatement is not considered for Activity Category D land uses.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum five dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies' input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

## 3.17.2 Affected Environment

A Noise Study Report (HELIX 2010b) was prepared to assess the potential noise impacts associated with the proposed project. It is incorporated into this document by reference and forms the basis for this Noise section of the EIR/EIS. The report identifies noise-sensitive locations, and predicts future traffic noise levels for the No Build and build alternatives. Future noise levels for all alternatives were modeled using LOS C traffic volumes to obtain the worst-case noise scenario.

### Existing Land Uses

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. The area adjacent to the proposed project consists of commercial, industrial, and undeveloped uses, as well as one educational use (Southwestern College satellite campus). The project area west of Enrico Fermi Drive was previously approved as part of the SR-905 project. The surrounding industrial and commercial land uses are considered land use Activity Category C; the college is land use Activity Categories B and E; and the undeveloped parcels are land use Activity Category D.

**Table 3.17-2**
**EXISTING NOISE LEVELS AT RECEIVERS IN THE PROJECT AREA**

| Receiver Number | Address/Station Number[1] | Assessors Parcel Number | Activity Category (NAC) | Existing Worst Hour Noise Levels Leq(h), dBA |
|---|---|---|---|---|
| R-1 | 7550 Panasonic Way/547+14 | 646-220-3100 | C (72) | 57[2] |
| R-2 | 1654 St. Andrews Avenue/549+84 | 646-221-3200 | C (72) | 57[2] |
| R-3 | 7558 Panasonic Way/550+45 | 646-220-0200 | C (72) | 57[2] |
| R-4 | 7651 St. Andrews Avenue/552+61 | 646-221-1600 | C (72) | 57[2] |
| R-5 | 7664 Panasonic Way/556+20 | 646-220-0400 | C (72) | 57[2] |
| R-6 | 7685 St. Andrews Avenue/557+28 | 646-221-2800 | C (72) | 57[2] |
| R-7 | 7664 Panasonic Way/559+82 | 646-220-0400 | C (72) | 57[2] |
| R-8 | 7701 St. Andrews Avenue/565+47 | 646-221-3100 | C (72) | 57[2] |
| R-9 | 7810 Waterville Road/568+01 | 646-220-2100 | C (72) | 57[2] |

**Table 3.17-2 (cont.)**
**EXISTING NOISE LEVELS AT RECEIVERS IN THE PROJECT AREA**

| Receiver Number | Address/Station Number[1] | Assessors Parcel Number | Activity Category (NAC) | Existing Worst Hour Noise Levels Leq(h), dBA |
|---|---|---|---|---|
| R-10 | Southwestern College, Higher Education Center, 8100 Gigantic Street/572+70 | 646-111-4200 | B (67)[6] | 57[2] |
| R-11 | Southwestern College, Higher Education Center, 8100 Gigantic Street/579+69 | 646-111-4200 | B (67)[7] and E(52)[8] | 57[2] |
| R-12 | 8375 St. Andrews Avenue/591+17 | 646-111-4500 | C (72) | 57[2] |
| R-13 | 7810 Waterville Road/617+20 | 646-220-2100 | C (72) | 55[3] |
| R-14 | 9020 Airway Road/631+20 | 646-121-2600 | C (72) | 55[3] |
| R-15 | 1840 Dornoch Court/39+74[9, 10, 11, 12] | 646-131-0400 | C (72) | 62[4] |
| R-16 | 2001 Sanyo Avenue/40+80[9, 11, 12] | 646-131-1400 | C (72) | 62[4] |
| R-17 | 1855 Dornoch Court/47+55[9. 11. 12] | 646-131-0900 | C (72) | 62[4] |
| R-18 | 8389 St. Andrews Avenue/83+13[12] | 648-070-0900 | C (72) | 51[5] |
| R-19 | 7247 Otay Mesa Road/93+16[12] | 648-070-1300 | C (72) | 51[5] |

[1] SR-905 station numbers, unless otherwise indicated.
[2] As measured at short-term monitoring locations ST-3 and ST-8.
[3] As measured at short-term monitoring location ST-7.
[4] As measured at long-term monitoring location LT-1.
[5] As measured at long-term monitoring location LT-2.
[6] At Southwestern College outdoor track
[7] Outside Southwestern College building
[8] Inside Southwestern College building
[9] Building Entrance Areas
[10] Outdoor Break Area
[11] Guard Station
[12] SR-11 station numbers
Source: HELIX 2010b

Land uses surrounding the proposed project are dominated by undeveloped land and industrial uses, along with several vehicle storage lots and the existing CVEF. Existing and proposed development in the land use study area consists primarily of industrial and transborder support uses, many of which were established with the expectation that facilities provided by the proposed project would be developed. SR-11 and the Otay Mesa East POE would be consistent with the County General Plan, EOMSP, the City General Plan and the OMCP.

Much of the planned development in the area is industrial use associated with the maquiladora industry, and is partially dependent upon or would benefit from the proposed project. Property owners/developers have been tracking the proposed project and have been planning/designing their development projects to accommodate SR-11 and the proposed POE, in the location that was selected in the Phase I ROD for the proposed project.

### Ambient Noise Levels

The ambient noise environment in the project area is characterized below, based on short-term and long-term noise monitoring conducted for this study. Measurements were taken to determine existing noise levels. The sites were chosen as being representative of similar sites in the area. No traffic monitoring data were collected or needed for this study. Since this project would be all new construction and construction of SR-905 has not yet been completed, all noise in the project area would be considered ambient noise, and no separate background noise level is identified. Ambient noise was primarily generated by vehicular traffic, air traffic (Brown Field and Border Patrol aircraft), and commercial and industrial uses.

Six short-term measurements were taken, in the locations shown as ST-3 to ST-8 on Figure 3.17-1. As reported in Table 6-2 of the NSR, the short-term measurements ranged from 46 to 65 dBA $L_{EQ}$ in the project area.

As shown in Figure 3.17-1, long-term monitoring locations were sited near the southern terminus of Dornoch Court, north of SR-11 Station 45+72 (LT-1), and in the undeveloped area near SR-11 Station 125+64 (LT-2). As reported in Figures 6-2 and 6-3 of the NSR, the long-term measurements ranged from 46 to 62 dBA $L_{EQ}$.

### 3.17.3 Environmental Consequences

To determine traffic noise impacts, 19 receiver locations were identified in the study area (refer to Figure 3.17-1), and the noise levels at these receivers were modeled (refer to Table 3.17-3). Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). Key inputs to the traffic noise computer model were the locations of roadways, shielding features (e.g., topography and buildings), noise barriers, ground type, and receivers. Because SR-11 would be a new roadway located in a predominately undeveloped area, and SR-905 in this location would be a new roadway that is not yet complete, no comparison of TNM modeled noise levels to measured levels is possible.

Worst-case traffic noise typically occurs when traffic is operating under LOS C conditions. Under LOS C conditions, traffic is heavy, but remains free flowing. The noise analysis assumes LOS C traffic conditions, which would constitute a worst case scenario for both the toll and no toll versions of the project. Since the analysis would be identical, the predicted noise levels are the same for both toll and no toll versions of the project, and the No Toll Variation is not analyzed separately in the NSR or this section of the EIR/EIS. Similarly, all alternatives analyzed include the SR-905/SR-125/SR-11 Full Interchange Variation (i.e. all potential future connectors), to assess the worst case scenario for any of the build alternatives.

The model was run with the most conservative traffic conditions: LOS C volumes for each lane, with 15% trucks in the two outside lanes. Therefore, the model produces the loudest possible noise levels, regardless of hour of day.

Impacts at the receiver locations are evaluated below through comparison of predicted future noise levels to ambient noise levels at the receiver locations (refer to Table 3.17-3). The NSR and this section analyze the significance of noise impacts from the proposed project alternatives based on consistency with the applicable NACs and whether the receiver has areas of frequent human use that would benefit from a lowered noise level. It is noted that no receivers currently are located adjacent to the POE and CVEF north of the border with Mexico; thus only the noise on SR-11 and the portion of SR-905 to be modified by the project is analyzed in this section.

**Table 3.17-3**
**PREDICTED FUTURE NOISE LEVELS FOR BUILD ALTERNATIVES**

| Receiver Number | Land Use | Activity Category (NAC in dBA) | Existing Noise Levels, $L_{eq(h)}$, dBA [1] | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Noise Level with Project[2] | Impact Type[3] | Noise Level with Project[2] | Impact Type[3] | Noise Level with Project[2] | Impact Type[3] |
| R-1 | I | C (72) | 57[4] | 68 | None | 68 | None | 68 | None |
| R-2 | I | C (72) | 57[4] | 70 | S[5] | 70 | S[5] | 70 | S[5] |
| R-3 | I | C (72) | 57[4] | 73 | S[5] | 73 | S[5] | 73 | S[5] |
| R-4 | I | C (72) | 57[4] | 75 | S[5] | 75 | S[5] | 75 | S[5] |
| R-5 | I | C (72) | 57[4] | 79 | S[5] | 79 | S[5] | 79 | S[5] |
| R-6 | I | C (72) | 57[4] | 77 | S[5] | 77 | S[5] | 77 | S[5] |
| R-7 | I | C (72) | 57[4] | 79 | S[5] | 79 | S[5] | 79 | S[5] |
| R-8 | I | C (72) | 57[4] | 77 | S[5] | 77 | S[5] | 77 | S[5] |
| R-9 | I | C (72) | 57[4] | 79 | S[5] | 79 | S[5] | 79 | S[5] |
| R-10[Cr] | E | B (67) | 57[4] | 74 | A/E[6] | 74 | A/E[6] | 74 | A/E[6] |
| R-11 (outside) | E | B (67) | 57[4] | 75 | S[7] | 75 | S[7] | 75 | S[7] |
| R-11 (inside) | E | E (52) | N/A | 50[8] | None | 50[8] | None | 50[8] | None |
| R-12 | I | C (72) | 57[4] | 69 | S[5] | 69 | S[5] | 69 | S[5] |
| R-13 | I | C (72) | 55[9] | 72 | S[5] | 72 | S[5] | 72 | S[5] |
| R-14 | I | C (72) | 55[9] | 71 | S[5] | 71 | S[5] | 71 | S[5] |
| R-15 | I | C (72) | 62[10] | 68 | None | 67 | None | 67 | None |
| R-16 | I | C (72) | 62[10] | 67 | None | 65 | None | 65 | None |
| R-17 | I | C (72) | 62[10] | 67 | None | 65 | None | 65 | None |
| R-18 | I | C (72) | 51[11, 12] | 69 | S[5] | 64 | S[5] | 64 | S[5] |
| R-19 | I | C (72) | 51[11,12] | 72 | S[5] | 67 | S[5] | 72 | S[5] |

[1] At R-1 to R-17, the approved design of SR-905 (currently under construction) would produce the majority of the existing build-out noise. Cumulative noise levels associated with SR-11 improvements would not result in an audible change, as described in the qualitative discussion and reflected in NSR Worksheet A.
[2] With project build alternatives, without noise barriers.
[3] S = Substantial Increase (12 dBA or more); A/E = approaches or exceeds NAC; or None = Does not exceed NAC or result in substantial increase)
[4] As measured at short term monitoring locations ST-3 and ST-8.
[5] Although noise levels approach or exceed NAC, and increase would be substantial, the receiver does not have an outdoor use area that would benefit from reduced noise levels.
[6] Although this receiver would experience a substantial increase when compared to existing noise levels, there would not be a substantial noise increase if compared to the build-out configuration of SR-905, as shown in NSR Worksheet A. In either case, noise levels would approach or exceed NAC.
[7] In a location that does not function as an area of frequent outdoor use; measurement used for interior analysis.
[8] Calculated based on modeled R-11 exterior noise level and exterior to interior analysis.
[9] As measured at short term monitoring location ST-7.
[10] As measured at long term monitoring location LT-1.
[11] As measured at long term monitoring location LT-2.
[12] Future No Build noise levels would be higher than existing noise levels, due to planned cumulative area development.
I = Industrial; E = Educational, Cr=Critical receiver
Source: HELIX 2010b

## Operational Noise Impacts

Build Alternatives

*Two Interchange Alternative*

Traffic noise impacts under the Two Interchange Alternative are predicted to occur at receivers R-2 through R-14, and R-18 and R-19, which represent 17 developed commercial/industrial properties and the Southwestern College outdoor track area. Existing noise levels range from 51 to 62 dBA and future predicted noise levels range from 50 to 79 dBA. Substantial noise increases (12 dBA increase or greater) are predicted at receivers R-2 through R-9, R-11 through R-14, and R-18. Approach/exceed noise impacts are predicted at receivers R-10 and R-19. With the exception of receiver R-10, there are no outdoor areas of frequent human use that would benefit from reduced noise levels at the commercial/industrial receptors that would experience substantial noise increases or that would approach or exceed the NAC. Therefore, noise abatement is only considered at receiver R-10.

Receiver R-10 represents the outdoor track area at Southwestern College. Parking lots and other outdoor areas at the college that are not used for educational activities are not considered to be benefited uses. Indoor uses at receiver R-11 would not experience noise levels approaching or exceeding the Activity Category E NAC of 52 dBA $L_{eq}$.

A noise barrier (NB-1) 10 feet in height and 591 feet in length was considered along the edge of shoulder since it would meet the minimum five dBA feasibility requirement. While the noise barrier was found to be feasible to construct, the Noise Abatement Decision Report (NADR; Caltrans 2010e) found that it would not be reasonable from a cost perspective. Therefore, no noise barrier is recommended.

It is noted that the unusually low noise levels identified immediately adjacent to proposed SR-11 in the Sanyo Avenue area are attributed to the roadway design. SR-11 would be elevated as it passes between the buildings at this location (refer to Figure 2-3). The elevation difference and the three-foot high concrete barrier along the outer edge of the roadway would minimize noise at the adjacent buildings. Thus, noise levels immediately adjacent to SR-11 in the Sanyo Avenue area would not approach or exceed the NAC, and no noise barrier analysis is required.

*One Interchange Alternative*

Similar to the Two Interchange Alternative, only the outdoor track at the Southwestern College (represented by receiver R-10) would experience noise levels exceeding the NAC, and would also benefit from a reduced noise level under the One Interchange Alternative (refer to Table 3.17-3).

Predicted traffic noise levels under the One Interchange Alternative would not approach or exceed the NAC of 72 dBA Leq(h) for Activity Category C land uses represented by receiver number R-19, because the R-19 modeling location was close enough to the proposed Alta Road Interchange under this alternative to experience some shielding from the three-foot high concrete barrier along the outer edge of the roadway (refer to Table 3.17-3 and Figure 3.17-1). However, even if noise levels farther away from proposed SR-11 on this parcel were to approach or exceed the NAC, there are no areas of frequent human use that would benefit from a reduced noise level in the vicinity of receiver number R-19, so no noise control analysis is required.

Therefore, substantial noise impacts under the One Interchange Alternative would only be experienced at the Southwestern College outdoor track at receiver location R-10, and this is the only location that must be considered for noise abatement.

*No Interchange Alternative*

Predicted noise levels for the No Interchange Alternative would be the same as those for the One Interchange Alternative for all of the identified receiver locations except R-19, where predicted traffic noise levels would approach or exceed the Activity Category C NAC of 72 dBA Leq(h) (refer to Table 3.17-3 and Figure 3.17-1). There are no areas of frequent human use that would benefit from a reduced noise level in the vicinity of receiver number R-19, however, so no noise control analysis is required.

Therefore, as in the case of the Two and One Interchange Alternatives, substantial noise impacts under the No Interchange Alternative would only be experienced at the Southwestern College outdoor track at receiver location R-10, and this is the only location that must be considered for noise abatement.

Variations on the Bulid Alternatives

*No Toll Variation*

As previously noted, the NSR analysis assumes LOS C traffic conditions, which would constitute a worst case scenario for both the toll and no toll versions of the project. Since the analysis would be identical whether or not the project included a toll, the No Toll Variation is not analyzed separately here. Implementation of the No Toll Variation would not alter the conclusions identified for the project build alternatives.

*46-foot Median Variation*

Under the 46-foot Median Variation of any of the build alternatives, the outer edge of SR-11 would be closer to adjacent industrial buildings in the Sanyo Avenue area than it would be under the baseline build alternatives that would incorporate a 22-foot median. Modeled noise levels at the receiver locations in the Sanyo Avenue area where the median would be wider (R-15, R-16 and R-17) under the three build alternatives with the 46-foot Median Variation are presented in Table 3.17-4.

**Table 3.17-4**
**PREDICTED FUTURE NOISE LEVELS IN THE SANYO AVENUE AREA WITH THE 46-FOOT MEDIAN VARIATION**

| Receiver Number | Land Use | Activity Category (NAC In dBA) | Existing Noise Levels, $L_{eq(h)}$, dBA [1] | Two Interchange Alternative | | One and No Interchange Alternative | |
|---|---|---|---|---|---|---|---|
| | | | | Noise Level with Project[2, 3] | Impact Type[4] | Noise Level with Project[2, 3] | Impact Type[4] |
| R-15 | I | C (72) | 62 | 67 | None | 65 | None |
| R-16 | I | C (72) | 62 | 67 | None | 64 | None |
| R-17 | I | C (72) | 62 | 67 | None | 64 | None |

[1] Long-term noise level measurement - Maximum hour noise measurement for area type (LT-1: Industrial/Commercial).
[2] The approved design of SR-905 (currently under construction), would produce a majority of the existing build-out noise. Cumulative noise levels associated with SR-11 improvements would not result in an audible change, as described in the qualitative discussion and reflected in Worksheet A.
[3] With project build alternatives, without noise barriers
[4] None = Does not exceed NAC or result in substantial increase).
I = Industrial
Source: HELIX 2010b

As in the case of the baseline build alternatives, Table 3.17-4 indicates that implementation of the 46-foot Median Variation of any of the build alternatives would result in predicted traffic noise levels that would not approach or exceed the NAC of 72 dBA $L_{EQ}$(h). The 46-foot Median Variation would not result in noise impacts over and above those resulting from the baseline build alternatives, and no additional noise abatement analysis would be required.

*SR-905/SR-125/SR-11 Interchange Variations*

To analyze the worst case scenario for each alternative, the noise modeling included the noise associated with the full SR-905/SR-125/SR-11 Interchange (i.e., all potential future interchange connectors). Scenarios involving fewer connectors (e.g., the SR-125 Connector Variation or the baseline project alternatives that would exclude other connectors [the southbound SR-125 to eastbound SR-11 connector, the westbound SR-11 to eastbound SR-905, and the westbound SR-905 to eastbound SR-11]) would likely result in marginally less noise than is shown in Table 3.17-3. Implementation of scenarios involving fewer connectors would not alter the conclusions identified for the project build alternatives as analyzed with the full SR-905/SR-125/SR-11 Interchange.

*Siempre Viva Road Full Interchange Variation*

If constructed, the Siempre Viva Road Full Interchange Variation would occupy an additional approximately 20.2 acres, compared to the half interchange at Siempre Viva Road contemplated as part of the baseline Two Interchange Alternative. The northwestern edge of the full interchange would be approximately 1,500 feet from the nearest receiver (the vehicle auction yard adjacent to Alta Road, represented by receiver number R-19; refer to Figure 3.17-1). This would be approximately 300 feet closer to the receiver than the northwestern edge of the half interchange. It is estimated that LOS C traffic noise levels with the project would be similar to or less than one dBA higher than modeled noise levels associated with the Two Interchange Alternative with the half interchange at this location; noise levels would approach or exceed the NAC of 72 dBA Leq(h) for this Activity Category C land use. As noted for the Two Interchange Alternative, there are no areas of frequent human use that would benefit from a reduced noise level in the eastern project area adjacent to the Siempre Viva Road Interchange; therefore, no noise barrier analysis is required.

No Build Alternative

At receivers R-1 through R-14, the difference between proposed project noise levels and the noise generated by traffic associated with built-out SR-905 would be below audible levels. Therefore, under the No Build Alternative, it is anticipated that future traffic noise levels at analyzed receivers where approved SR-905 is under construction would be similar to noise levels predicted for the proposed project, and higher than existing noise levels.

Under the No Build Alternative, the SR-905 project would proceed with the construction of a local access ramp to Enrico Fermi Drive through the Sanyo Avenue area, near receivers R-15, R-16 and R-17. The design of this SR-905 ramp would likely be similar to the No Interchange Alternative through this area, although traffic volumes would likely be lower on the SR-905 local access ramps than on SR-11. Considering this, future noise levels at R-15 through R-17 under the No Build Alternative would be similar to or lower than noise associated with the proposed project build alternatives.

Currently, the area east of Enrico Fermi Drive is largely undeveloped or subject to temporary uses such as truck parking. It is anticipated that if the No Build Alternative were selected for the proposed project, planned development in the area east of Enrico Fermi Drive would proceed, including the construction of County Circulation Element roads. Therefore, it is anticipated that future traffic noise levels under the No

Build Alternative would be lower than those predicted for the proposed project in this area (e.g., near receivers R-18 and R-19), but higher than existing noise levels.

**Construction Noise**

Construction noise is regulated by Caltrans Standard Specifications Section 7-1.01(I), "Sound Control Requirements" (Caltrans 2006d), which states that noise levels generated during construction shall comply with applicable local, state, and federal regulations, and that all equipment shall be fitted with adequate mufflers according to the manufacturers' specifications.

Table 3.17-5 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects.

**Table 3.17-5**
**CONSTRUCTION EQUIPMENT NOISE**

| Equipment | Maximum Noise Level (dBA at 50 feet) |
|---|---|
| Scrapers | 89 |
| Bulldozers | 85 |
| Heavy Trucks | 88 |
| Backhoe | 80 |
| Pneumatic Tools | 85 |
| Concrete Pump | 82 |
| Impact Pile Driver | 101 |

Source: Federal Highway Administration Roadway Noise Construction Model Version 1.0, 2006

Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

## 3.17.4 Avoidance, Minimization and/or Mitigation Measures

**Operational Noise**

In accordance with 23 CFR 772, noise abatement is considered where noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Receiver R-10 represents the outdoor track area at Southwestern College. Measurements taken at receiver R-10 indicate that the existing noise level at that location is 57 dBA. Once SR-905 is built and operational, the noise level at this location is predicted to be 74dBA. The future noise level at receiver R-10 with the project is also predicted to be 74 dBA. Because the predicted future noise level would exceed the NAC for recreational uses (67 dBA), the three frontage units represented by receiver R-10 would be adversely affected by noise.

Noise abatement is considered acoustically feasible if it would achieve a minimum five-dBA reduction at the receptor. Other non-acoustical factors related to sight distance standards, safety, maintenance, and security also could affect feasibility. Noise barriers are considered reasonable if the estimated cost of abatement is equal to or less than the calculated allowance. The project NSR identifies one potential feasible noise barrier in the project area (NB-1). The feasible noise barrier was then further evaluated for cost reasonableness in the NADR.

To achieve the minimum five dBA reduction required by Caltrans guidelines feasibility requirements, a 10-foot noise wall (NB-1) would be needed at receiver R-10. If the total cost of the wall at this location is less than the total cost allowance, then the wall would likely be incorporated into the project. The total cost allowance, calculated in accordance with Caltrans' Traffic Noise Analysis Protocol, is $105,000. The current estimated cost of the wall is $289,457, which would exceed the cost allowance. Therefore, construction of noise barrier NB-1 is not recommended.

**Construction Noise**

Because Caltrans Standard Specifications Section 7-1.01(I) (Caltrans 2006d) requires the contractor to comply with the applicable local noise standards, the project NSR notes the following:

- All equipment should have sound-control devices that are no less effective than those provided on the original equipment. No equipment should have an unmuffled exhaust.

- As directed by Caltrans, the contractor should implement appropriate additional noise minimizing measures, such as changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

Required contractor compliance with applicable local noise standards would avoid or minimize temporary adverse noise from construction.

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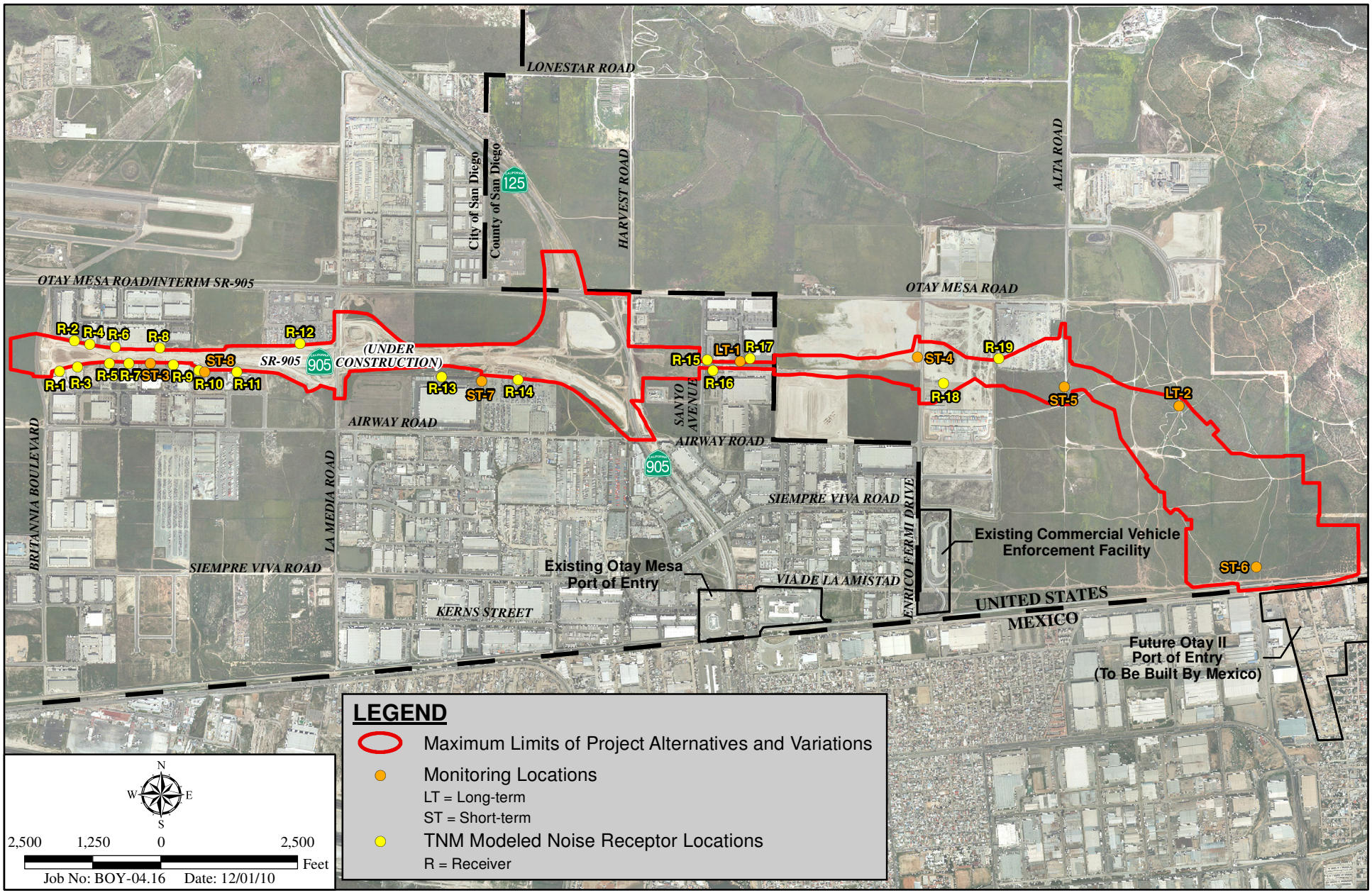


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# Noise Receiver and Monitoring Locations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.17-1

# 3.18 ENERGY

## 3.18.1 Regulatory Setting

The CEQA Guidelines, Appendix G, Energy Conservation, states that EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

NEPA (42 USC Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

## 3.18.2 Affected Environment

### Gasoline Consumption

In 2007[1], motor gasoline accounted for 53 percent of total petroleum use in California; in the same year, transportation uses accounted for 39.8 percent of total energy use in California, with residential uses accounting for 18.1 percent, commercial uses accounting for 19.0 percent and industrial uses accounting for 23.0 percent (U. S. Department of Energy 2007). While state and federal policies, such as the California Low-Emission Vehicle Program and the Federal Energy Policy Act of 1992, are increasing the use of alternative-fuel and low-emission vehicles, the consumption of non-renewable resources, such as fossil-fuels, remains high and points to the need to conserve such energy resources. The need to develop energy efficient projects is also highlighted in the Caltrans Director's Policy on Energy Efficiency, Conservation and Climate Change (Caltrans 2007f), which states:

> "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 GHG[2] emissions.
>
> The intent of this policy is to implement a comprehensive, long-term departmental energy policy, interagency collaboration, and a coordinated effort in energy and climate policy, planning, and implementation."

### Electricity Consumption

In 2008, California used 285,574 gigawatt hours of electricity, of which 208,519 gigawatt hours (73 percent) were generated in-state (California Energy Commission [CEC] 2009a). In 2008, natural gas accounted for 45.7 percent of total system power, coal 18.2 percent, nuclear 14.5 percent, renewable sources 10.6 percent, and large hydro 11.0 percent (CEC 2009b). California's population is projected to exceed 54 million by the year 2040. Increased populations, economic activity, and a trend of higher growth rates in the central portion of the state than in the coastal areas indicates the growing pressure on California's energy system and the increasing importance of energy efficiency (CEC 2008).

### Natural Gas Consumption

In 2008, natural gas accounted for more than 45 percent of California's total system needs (140,215 gigawatt hours). Eighty five percent of natural gas supplies are imported via pipelines from the

[1] This provides the most recent data available from the U.S. Department of Energy, Energy Information Administration.
[2] Greenhouse gas.

Southwest, Rocky Mountains and Canada (CEC 2009a). Since 1970, the number of households in California has almost doubled from 6.5 million to 12.5 million, pushing total residential natural gas consumption from about 5,500 million therms in 1970 to about 6,700 million therms in 2007. However, the average annual gas consumption per household has dropped more than 36 percent, from 845 therms to 538 therms. Commercial uses are utilizing approximately 10 percent of the natural gas consumed by the state. Natural gas has become an increasingly important source of energy since more of the state's power plants rely on this fuel (CEC 2007).

### 3.18.3 Environmental Consequences

**Build Alternatives**

The following analysis of potential energy impacts is applicable to all three identified build alternatives (Two Interchange, One Interchange, and No Interchange). All of the potential alternatives would consume similar types and amounts of energy during and after construction, with the type and nature of associated impacts therefore also the same. While the specific amounts of energy used and saved could vary slightly among the various alternatives, the level of impact and associated requirements to address these potential effects would be the same.

The main sources of energy saved and consumed are vehicle fuels (primarily gasoline and diesel fuels), electricity and natural gas.

Gasoline, Diesel and Other Vehicle Fuels

Throughout construction, local circulation and travel on any portions of SR-905 that have been completed and opened to vehicles would be maintained; however, temporary detours and reduced numbers of available lanes may be required, resulting in some temporary delays. As a result, idling times could increase for vehicles traveling in the area, which may result in additional gasoline consumption. In addition, construction equipment, delivery trucks and employee vehicles traveling to the construction site would consume diesel and gasoline fuels.

After construction, energy would be used by vehicles traveling on SR-11 and SR-905 and for long-term maintenance and operation of these facilities. The proposed facilities would increase the rate of traffic movement across the border and would reduce wait times at the existing and proposed POEs. In addition, the new facilities would reduce congestion on many local roads. The project would be beneficial to energy consumption, as vehicles would spend less time idling and use less fuel. The proposed toll facilities would be designed to maintain vehicle wait times at 30 minutes or less. Employees at the POE, CVEF and toll administration building (estimated at 475 total employees) would use vehicle fuels to travel to these new places of employment. This is a minor component of the overall fuel use associated with the proposed project.

When balancing vehicle fuel consumption during construction and operation against fuel consumption saved by reducing congestion and improving other transportation efficiencies, the build alternatives would not result in adverse energy impacts related to vehicle fuel consumption. While the decreased wait times may provide an incentive for additional trips across the border, the reduction in idling times associated with the maintained or improved LOS discussed in Section 3.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities* would result in an overall decrease in vehicle fuel consumption that would more than offset the impacts associated with any additional trips. Per modeling completed as part of Caltrans' Climate Action Program (December 2006), implementation of the Two- and One- Interchange Alternatives would be expected to decrease overall energy consumption compared to the No Build Alternative for 2015 and 2035 (refer to the analysis presented in Section 4.7 of this EIR/EIS). The No Interchange Alternative would not provide a reduction in energy consumption. The decreases in energy consumption would be attributed to the efficiency of vehicles moving through the

POE, the lack of congestion, and improved travel times along the SR-11 corridor and the local street network. Despite the localized increase in traffic levels along the SR-11 corridor between opening day and the horizon year, regional transportation efficiency would be increased and overall energy use would be reduced.

Electricity and Natural Gas

During the construction period of SR-11 and the POE, CVEF and SR-11/SR-905 connectors with associated improvements to SR-905, energy would be used for the manufacture of the materials that would be used for the construction and interior furnishing of proposed project facilities. This would be a short-term, temporary impact.

Operations of SR-11 would consume electricity for lighting, landscape irrigation (if required) and operation of automated toll facilities. Operations at the POE and CVEF would consume electricity and natural gas for office equipment, heating/cooling, and interior and exterior lighting.

Electricity and natural gas consumption for the project would not be excessive and would be reduced by implementing a series of standards for environmentally sustainable construction. For example, all landscaping at the POE would be irrigated with permanent, efficient, centrally controlled systems, and infiltration basins would be designed to meet Leadership in Energy and Environmental Design (LEED) "silver" standards. In addition, the energy savings requirements of the Energy Independence and Security Act would further result in less consumption of fossil fuels and electricity. However, the project facilities would be new energy uses in an area where energy use is currently minimal.

**Variations on the Build Alternatives**

Implementation of the SR-905/SR-125/SR-11 Interchange Variation and the 46-foot Median Variation would result in similar energy expenditures and savings to those described above for the build alternatives.

Implementation of the No Toll Variation would also be expected to result in similar energy consequences to those described for the build alternatives. Border wait time studies indicate that the toll alternatives would improve border wait times and reduce idling time at the new POE more than the No Toll Variation. In view of the "smart technology" to be implemented for the toll system, the toll facilities are expected to operate efficiently to minimize vehicle idling. Energy use from idling at the Otay Mesa East POE would therefore be reduced more by implementing a toll facility than by eliminating the toll facilities. The elimination of tolls from the build alternatives would be expected to result in the diversion of a larger number of trips from the existing Otay Mesa POE to the new POE, thereby resulting in shorter idling times at the existing POEs, while increasing idling times at the new POE, compared to the toll scenario. Per modeling completed as part of Caltrans' Climate Action Program (December 2006), implementation of the Two- and One- Interchange Alternatives, with or without a toll, would be expected to increase the vehicle processing capacity at the border, thereby shortening the overall wait time per vehicle compared to the No Build Alternative. The No Interchange Alternative, with or without a toll, would not provide a reduction in energy consumption. Overall, energy use under the No Toll Variation is expected to be improved compared to the No Build Alternative and similar to or slightly decreased from that for the proposed build alternatives with a toll.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts related to energy would occur. The No Build Alternative could contribute to continued long wait times to cross the border, with associated traffic

congestion and inefficient energy use by vehicles waiting at the border. These impacts would be expected to increase over time without implementation of the proposed project.

### 3.18.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Design Variations**

The following measures recommended by the California Attorney General (California Department of Justice 2008) could be implemented to minimize the effects of energy use by the project:

Otay Mesa East POE/CVEF

- Design buildings to be energy efficient
- Install efficient lighting control systems
- Site and design buildings to take advantage of daylight
- Use landscaping and sun screens on west and south exterior building walls to reduce energy use, where practical
- Install light-colored "cool" roofs and cool pavements
- Install solar panels on roofs of buildings and inspection bays
- Use combined heat and power in appropriate applications for building HVAC systems
- Reuse and recycle construction waste (including but not limited to soil, vegetation, lumber, metal and cardboard)
- Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas
- Continue to work with SANDAG, GSA, and EPA to evaluate the potential for truck stop electrification at the Otay Mesa East POE or at the other POEs in the region, as appropriate, to achieve the greatest possible benefit from this technology
- Use low or zero-emission construction vehicles
- Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles by employees, including bicycles
- Design the POE to be transit, pedestrian and bicycle friendly, by maximizing the safety and efficiency of the facilities and processes serving these border crossers
- Incorporate low water use landscaping to save energy associated with water production and delivery

SR-11

- Install solar powered lighting
- Reuse and recycle construction and demolition waste (including but not limited to soil, vegetation, concrete, lumber, metal and cardboard)
- Use low or zero-emission vehicles for project construction and maintenance, including construction vehicles and personnel vehicles
- Institute a low-carbon fuel vehicle incentive program, such as toll free access to the project facilities
- Incorporate bicycle-friendly intersections at interchange ramps
- Incorporate low water use landscaping
- Develop a construction phasing plan to identify the sequence of construction and help minimize traffic delays
- Control traffic delays to the extent feasible during periods of many simultaneous construction operations
- Implement a comprehensive TMP to further minimize delays during construction. The TMP is designed to increase driver awareness, ease congestion, and minimize delay during construction.

### No Build Alternative

There is a potential for energy impacts to occur associated with greater traffic congestion under the No Build Alternative. Because no project action would occur under the No Build Alternative, no associated avoidance, minimization or mitigation measures would be required.

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## 3.19 NATURAL COMMUNITIES

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under FESA are discussed below in Section 3.23, *Threatened and Endangered Species.* Wetlands and other waters are also discussed below in Section 3.20, *Wetlands and Other Waters*.

A natural community is a distinct, identifiable, and recurring association of plants and animals that are ecologically related (California Fish and Game Code subsection 2702[d]). Three natural community types occur in the Biological Study Area (BSA): wetland, shrubland, and grassland.

Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin 1979). Examples of wetlands in the BSA include mule fat scrub-disturbed, freshwater marsh, and disturbed wetland.

Shrubland is a natural community dominated by woody shrubs. A shrub is a perennial, woody plant that branches at ground level to form several stems. Shrublands form in several different biomes, and may be either a permanent habitat type that is stable over time, or a transitional one, caused when another habitat type is disturbed by natural or human causes, such as fire. Diegan coastal sage scrub is the shrubland found in the BSA.

Grassland is land where grass or grass-like vegetation grows and is the dominant form of plant life. Grassland in the BSA consists primarily of non-native vegetation.

### 3.19.1 Regulatory Setting

The proposed project is subject to a number of federal and state regulatory requirements related to the biological environment, as described below and in subsequent sections.

#### National Environmental Policy Act

NEPA directs "a systematic, interdisciplinary approach" to planning and decision-making and requires environmental statements for "major federal actions significantly affecting the quality of the human environment." Implementing regulations by the CEQ (40 CFR Parts 1500-1508) require federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. NEPA issues relevant to natural communities may include potential impacts to natural communities of concern, wildlife corridors, habitat fragmentation, and regional conservation plans, such as Habitat Conservation Plans (HCPs) or MSCPs.

#### Title 23 United States Code Section 109 – Standards

The goal of 23 USC 109(h) is to "…assure that possible adverse economic, social, and environmental effects relating to any proposed project on any federal-aid system have been fully considered in developing such project, and that the final decisions on the project are made in the best overall public

interest, taking into consideration the need for fast, safe and efficient transportation, public services, and the costs of eliminating or minimizing such adverse effects." Among the potential adverse effects to be considered is the "destruction or disruption of… natural resources," which could include natural communities.

**California Environmental Quality Act Guidelines**

CEQA identifies the following potential CEQA issues relevant to natural communities: substantial adverse effects on sensitive natural communities, substantial interference with the movement of any resident or migratory fish or wildlife species, and conflict with local policies or ordinances or with the provisions of an adopted HCP.

**Multiple Species Conservation Program**

NCCP initiated by the State of California in 1991 resulted in the promulgation of the special 4(d) rule of the FESA. This rule focuses on conserving coastal sage scrub habitat to avoid the need for future federal and state listing of each individual coastal sage scrub-dependent species. The City, County, USFWS, CDFG, and other local jurisdictions joined together in the late 1990s to develop the MSCP, a program to ensure the viability of covered habitat (generally upland) and species throughout the region, while still permitting some level of continued development. The County of San Diego Subarea Plan (County 1997) was created to avoid or reduce adverse effects to regionally sensitive biological resources through efforts such as avoiding or minimizing development in coastal sage scrub habitat, as well as mitigating impacts by habitat revegetation, creation, and/or preservation. The Subarea Plan regulates effects on natural communities throughout the region, including those on East Otay Mesa. Although the proposed project is located within the South County Segment of the Subarea Plan, Caltrans is not an enrolled entity in the NCCP. While Caltrans strives to be consistent with the MSCP, it is not required to comply with the Subarea Plan. Rather, because the proposed project has a federal nexus, it would be subject to permitting under Section 7 of the FESA.

Each segment of the Subarea Plan has been mapped according to the sensitivity of its biological resources, with named designations identified to reflect each mapped area's relative level of constraint for proposed development in the County. Although the proposed project is not subject to these processes (because Caltrans is not an enrolled entity in NCCP, and the proposed project does not require County approval) the designations reflect the relative sensitivity of the biological resources in each mapped area (Figure 3.19-1, *MSCP Designations and Proposed Mitigation Sites*). The BSA for the proposed project contains three such designations: Take Authorized, Minor Amendment Area, and Minor Amendment Area Subject to Special Considerations.

Take Authorized area in the BSA includes Enrico Fermi Drive that occurs within the SR-905 approved Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR) limits of disturbance for which impacts have already been permitted. The BSA also occurs in a Minor Amendment Area as identified in the Subarea Plan. According to the Subarea Plan, minor amendment properties contain habitat that could be partially or completely eliminated (with appropriate mitigation) without significantly affecting the overall goals of the Subarea Plan.

Additionally, Minor Amendment Areas Subject to Special Considerations occur in the southeastern portion of the BSA. These areas are subject to requirements of the County's EOMSP (County 2002). The EOMSP states that prior to any development including clearing or grading, a Resource Conservation Plan (RCP) shall be approved by the County for parcels with a "G" Designator (i.e., MSCP Minor Amendment Areas Subject to Special Consideration; County 2002). Caltrans would not be required to produce an RCP because it is not subject to the MSCP. However, this description of the proposed

project's context within the MSCP has been included because Caltrans strives to be consistent with the MSCP.

## 3.19.2 Affected Environment

An NES was completed for the proposed project addressing natural communities present in the BSA (HELIX 2010d, Section 4.1; Figures 3.19-2a and 3.19-2b, *Vegetation/Impacts Map*). Natural communities in the BSA were originally surveyed and mapped in 2000, 2004, and 2005, and the mapping was updated in 2006 and 2008. Mapping within the SR-905 approved FEIS/FEIR limits of disturbance is not shown on Figure 3.19-2a because this area is developed or developing, and/or the impacts have already been permitted by the resource agencies.

This section addresses natural communities that are of concern because they are: (1) considered rare within the region or sensitive by CDFG (Holland 1986) and/or (2) support special status plants or animals protected under the federal and/or state Endangered Species Acts (ESAs). Other communities, such as disturbed habitat, are not addressed because they are not natural communities of concern, and compensation is not proposed for impacts to them. This section also addresses wildlife corridors and habitat fragmentation because natural communities provide connections between habitat areas and linkages between large blocks of habitat; they occur within wildlife corridors; and they supply the resources (e.g., food and shelter) that wildlife need to survive and successfully reproduce.

### Natural Communities of Concern

Twelve natural communities of concern occur within the BSA: vernal pool, basin with fairy shrimp, freshwater marsh, mule fat scrub-disturbed, disturbed wetland, Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, coastal sage scrub restoration, native grassland, non-native grassland, non-native grassland-disturbed, and grassland restoration (Figures 3.19-2a and 3.19-2b). Some of these communities occur within critical habitat for federally listed species; critical habitat is described in Section 3.23, *Threatened and Endangered Species*. Freshwater marsh, mule fat scrub-disturbed, and disturbed wetland are under the jurisdiction of the USACE and/or CDFG; these communities are described in Section 3.20, *Wetland and Other Waters*.

#### Vernal Pools

Vernal pools are temporary wetland habitats formed under specific edaphic, topographic, and climatic conditions. The edaphic conditions include a subsurface hardpan, or claypan, characterized by very slow permeability that inhibits the downward percolation of water. The landscape conditions usually consist of relatively level areas (e.g., mesas) with low hummocks (mima mounds) and shallow basins (vernal pools). The climate consists of cool, wet winters and hot, dry summers. Under these conditions, water ponds in the depressions during the rainy season gradually evaporate over time, and are completely dry over the summer and fall. Vernal pools are also identified by having at least one indicator plant species (USACE 1997, Zedler 1987). Road pools also occur in dirt roads and other disturbed places that have the seasonal hydrology of vernal pools. These road pools often exist in historic vernal pool areas. They may, however, also occur in non-historic locations due to soil compaction, removal of native vegetation, etc.

Bauder (1987) claimed that historical estimates of vernal pool habitat in the County consisted of 28,595 acres and that more than 97 percent of vernal pool habitat has been lost to urbanization and agricultural conversion since 1986. Remaining vernal pool habitat is mostly isolated, degraded, and/or fragmented. One vernal pool occurs in the eastern portion of the BSA (Figure 3.19-2b).

Basins with Fairy Shrimp

Although basins by themselves are not resources of concern, two basins in the eastern portion of the BSA support federally listed endangered San Diego or Riverside fairy shrimp. As a result, these two basins are mapped as a distinct natural community of concern (Figure 3.19-2b).

Diegan Coastal Sage Scrub (including disturbed)

Coastal sage scrub is one of the two major shrub types that occur in California. This habitat type occupies xeric sites characterized by shallow soils. Sage scrub is dominated by low subshrubs, many of which are drought-deciduous, an adaptation that allows them to withstand prolonged summer and fall drought periods (Holland 1986). Sage scrub species have relatively shallow root systems and open canopies, which allow for a substantial, seasonal, herbaceous plant component. Diegan coastal sage scrub in the BSA contains plant species such as California sagebrush (*Artemisia californica*), San Diego County viguiera (*Viguiera laciniata*), and California buckwheat (*Eriogonum fasciculatum*). The disturbed phase of this vegetation community has a lower cover of shrubs; the shrub cover has been replaced with non-native grassland species.

Coastal sage scrub supports a number of state and federally listed endangered, threatened, and rare vascular plants, as well as several bird and reptile species that are federally listed or are candidate species for federal listing. This habitat has long been under development pressure, originally from agriculture and in more recent decades from urbanization and human population growth. At the time the NCCP was instituted (1991), the USFWS estimated that about 343,000 to 444,000 acres of coastal sage scrub remained in California, representing about 14 to 18 percent of its historic extent (Pollak 2001). A more recent source, the California Wildlife Action Plan prepared for CDFG, also notes that as of the early 1990s, about 400,000 acres of coastal scrub remained, representing no more than 18 percent of its historic extent (CDFG 2007). According to Oberbauer (1991), the historical reduction of sage scrub in the County is approximately 72 percent. The primary mechanism for the loss of sage scrub within California has been grazing and, more recently, urbanization. Diegan coastal sage scrub (including disturbed) occurs on gentle slopes in the eastern-most portion of the BSA (Figure 3.19-2b).

Coastal Sage Scrub Restoration

One area in the eastern portion of the BSA is in the process of being restored to coastal sage scrub following installation of a natural gas pipeline (Figure 3.19-2b). The restoration includes a combination of container stock and hydroseeding. There is currently low cover of sage scrub species in this area. Coastal sage scrub restoration is a natural community of concern for the same reasons as Diegan coastal sage scrub.

Native Grassland

Native grassland is a community dominated by species such as purple needlegrass (*Nassella pulchra*) or coastal saltgrass (*Distichlis spicata*). The majority of native grasslands in California have been displaced by non-native grassland dominated by introduced, annual species; however, native grasslands persist as small, isolated islands. Native grasslands are one of the most heavily impacted plant communities in California. The conversion from native to non-native grassland occurred so rapidly after European colonization that there is debate among ecologists as to the original species composition and physiognomy of this community when it was in a pristine condition. Native grassland occurs in two small areas adjacent to a drainage in the east-central portion of the BSA (Figure 3.19-2b). These patches are dominated by coastal saltgrass intermingled with non-native grasses and forbs such as oats (*Avena* sp.) and mustard (*Brassica* sp.).

Non-native Grassland (including disturbed)

Non-native grassland is a dense to sparse cover of annual grasses often associated with numerous species of showy-flowered, native, annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. This vegetation community covers the majority of the eastern portion of the BSA and small areas of the western portion of the BSA (Figures 3.19-2a and 3.19-2b). Typical species present include oats, red brome (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), filaree (*Erodium* spp.), Italian ryegrass (*Lolium multiflorum*), and mustard. Non-native grassland is the dominant vegetation community within the BSA. The disturbed phase of this community (Figure 3.19-2a) supports a substantial cover of non-native forbs, such as mustard. Non-native grassland (including disturbed) provides important foraging and/or nesting habitat for many special status birds of prey such as the burrowing owl (*Athene cunicularia*), white-tailed kite (*Elanus leucurus*), and northern harrier (*Circus cyaneus*).

Grassland Restoration

Two areas in the eastern part of the BSA are in the process of being restored to grassland following installation of a natural gas pipeline (Figure 3.19-2b). The areas support a dense cover of broad-leaved, exotic forbs that have been killed with herbicide. This strip of weeds passes through non-native grassland and is marked by signs that identify it as a restoration area. This community is a natural community of concern for the same reasons as non-native grassland (including disturbed).

**Wildlife Corridors and Habitat Fragmentation**

Wildlife Corridors

Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. They represent areas where wildlife movement is concentrated due to natural or artificial constraints. Local corridors provide access to resources such as food, water, and shelter. Animals can use these corridors to travel between different habitats (i.e., riparian and upland habitats), which they may use at different points throughout their life histories. Regional corridors, on the other hand, link two or more large blocks of habitat, providing avenues for movement, dispersal, migration, as well as contact between otherwise distinct populations, including populations of large mammals such as mountain lion (*Felis concolor*), southern mule deer (*Odocoileus hemionus fuliginata*), bobcat (*Lynx rufus*), and coyote (*Canis latrans*).

The eastern portion of the BSA is a local corridor in that it provides access to resources for animals in the BSA, and it may provide access to resources for mammals that may enter the BSA, particularly from the east (Figure 3.19-3, *Wildlife Corridors*). The BSA does not connect large blocks of habitat, rather it is on the western edge of a large block of habitat. Therefore, it is not a regional corridor. The central and western portions of the BSA are disturbed and developed (or developing) and do not provide important resources for wildlife, so they are not considered part of a corridor.

Vegetation in the eastern portion of the BSA is limited almost exclusively to non-native grassland on relatively flat topography that may not provide adequate cover for mammals such as southern mule deer and mountain lion (Figure 3.19-2b). The land east of the BSA supports sage scrub vegetation that provides greater vegetative cover, and it has greater topographic variation (i.e., canyons and hills) than the BSA (Figure 3.19-3). Sign of mountain lion and mule deer has not been observed in the BSA during multiple years of surveys for the proposed project, but the southern mule deer is known to occur in the Bureau of Land Management Otay Mountain Wilderness Area east of the BSA (Mock 2002; Figure 3.19-4, *Conserved Land*). Coyote, a much more ubiquitous species, has been directly observed on numerous occasions in the eastern portion of the BSA during surveys for the proposed project. The eastern portion of the BSA is subject to daily and frequent border patrol and military training activities,

illegal off-road vehicle activity, and various surveying/maintenance activities by contractors and utility personnel (e.g., border fence repair contractors and SDG&E and OWD personnel). All of these activities, along with the lack of adequate vegetative cover render the eastern portion of the BSA of low quality as a local corridor. It is more likely that most local wildlife movement remains and would remain east of the BSA.

In the vicinity of the BSA, Johnson Canyon is a local corridor because it essentially ends near Alta Road where the road and several developments interrupt its connection between the Otay River Valley to the west and the San Ysidro Mountains to the east (Figure 3.19-3). Therefore, it does not connect large blocks of habitat. Johnson Canyon is a tributary drainage to the Otay River, and mammals can travel up and down Johnson Canyon from the Otay River Valley. Johnson Canyon supports grassland, coastal sage scrub, and riparian scrub vegetation that may provide suitable cover for large mammals and provide access to resources such as food, water, and shelter.

Alternatively, O'Neal Canyon, east of Johnson Canyon, is a regional corridor in that it provides a direct connection between two large blocks of habitat: the San Ysidro Mountains and the Otay River Valley (Figure 3.19-3). O'Neal Canyon supports coastal sage scrub, chaparral, and riparian scrub vegetation that may provide suitable cover for large mammals. Alta Road crosses O'Neal Canyon over a large fill, and this may be an impediment to wildlife movement through the canyon. While there is a large concrete box culvert present to allow water to travel down the canyon under Alta Road (and presumably for mammals to move through the culvert as well), this culvert appears to be very long (perhaps up to 500 feet long), and mammals may not choose to travel through it. It is possible that they could travel up the fill slope and cross over Alta Road instead. The Otay River Valley is also a regional corridor because it connects conserved blocks of habitat around Lower Otay Reservoir in Otay Valley Regional Park with conserved habitats to the west throughout the Otay River Valley (Figures 3.19-3 and 3.19-4), eventually connecting with south San Diego Bay. The Otay River Valley supports a variety of vegetation types including, but not limited to, grassland, riparian, wetland, sage scrub, and chaparral communities.

Habitat Fragmentation

Habitat fragmentation involves dividing sensitive habitat, potentially severing connectivity between sensitive habitats, or potentially severing linkages between large blocks of habitats (e.g., conserved lands), thereby lessening their biological value.

A review of California Essential Habitat Connectivity Data (CDFG 2010) shows that there are no Interstate Connections, Essential Connectivity Areas, or Natural Landscape Blocks within the BSA.

The eastern portion of the BSA consists primarily of non-native grassland and patches of Diegan coastal sage scrub, which are sensitive habitats (i.e., natural communities of concern; Figure 3.19-2b). The central and western portions of the BSA consist primarily of disturbed habitat and developed land, which are not natural communities of concern (Figure 3.19-2a). The central and western portions of the BSA are largely surrounded by other land that is disturbed and developed and not natural communities of concern (Figures 3.19-2a and 3.19-2b).

The eastern portion of the BSA is directly connected to large blocks of conserved lands to the east. Those conserved lands continue north and west but with no direct connection to the BSA (Figure 3.19-4). Conserved lands include MSCP Biological Resource Core Areas (BRCAs), MSCP Subarea preserves (i.e., County Preserve, City of Chula Vista Preserve, and City of San Diego MHPA), and/or Bureau of Land Management Wilderness. Since there are no habitat linkages identified by the County, City, or City of Chula Vista MSCP Subarea Plans within or near the BSA (Figure 3.19-4), the proposed project would not sever any linkages between these conserved lands.

The conserved lands east of the BSA include the San Ysidro Mountains, Otay Mountain, and even farther east, Marron Valley. While the BSA presently provides a connection to these conserved lands with habitat to the south and west of the BSA, the area south and west of the BSA is planned for mixed industrial uses under the EOMSP, and projects are already proposed in this area (refer to Section 3.1). Furthermore, the County circulation element includes the extensions of Siempre Viva Road and Airway Road through this area as major roads (County 2010). This area south and west of the BSA currently supports approximately 227 acres of non-native grassland that support the burrowing owl and numerous other non-listed, special status plant and animal species. This area also supports 15 road or vernal pools with federally listed endangered San Diego and/or Riverside fairy shrimp.

Immediately north of the BSA lies Otay Mesa Road and then land that is undeveloped, but disturbed, and appears to have been historically farmed. It presently supports non-native, weedy vegetation or is cleared of vegetation. Some development also occurs to the north along Alta Road including, but not limited to, several detention facilities and a state prison. These developed or disturbed areas and Otay Mesa Road separate the BSA from the conserved lands to the north (Figure 3.19-4), so the proposed project would not affect connectivity between the BSA and those conserved lands since connectivity has already been lost.

The conserved lands that continue to the northwest of the BSA include Otay Valley Regional Park and the Otay River Valley (and its tributaries Johnson Canyon and O'Neal Canyon). Continuing south from the Otay River Valley, west of the BSA, conserved lands continue west and then south to the U.S. - Mexico international border and include areas such as Dennery Canyon, Moody Canyon, and Spring Canyon (Figure 3.19-4). Again, developed or disturbed areas and Otay Mesa Road separate the BSA from these conserved lands, so the proposed project would not affect connectivity between the BSA and those conserved lands.

There is virtually no habitat connectivity from the BSA south to the U.S. - Mexico border, except along Alta Road (south and west of the BSA) where non-native grassland still occurs. This grassland habitat ends at the U.S. - Mexico international border fence. There is no habitat remaining in Mexico south of the BSA; it has all been developed, and the presence of the U.S. - Mexico international border fence precludes habitat connectivity between the U.S. and Mexico for most species (Figures 3.19-2b, and 3.19-4).

## 3.19.3 Environmental Consequences

### Build Alternatives and Variations

The following analysis of potential impacts to natural communities of concern, as well as wildlife corridors and habitat fragmentation, addresses all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or without the associated variations.

#### Direct Impacts

*Natural Communities of Concern*

Direct, permanent impacts to natural communities of concern would result from removal of the natural communities during construction and their replacement with paved roadways, cut and fill slopes, drainage features, retaining walls, and all POE/CVEF facilities. Temporary and permanent easements are proposed outside of the proposed project R/W. These easements would be necessary for the relocation of a natural gas pipeline along the northeastern boundary of the proposed POE/CVEF, as well as for modifying and

maintaining a portion of an existing drainage along the western boundary of the Siempre Viva Interchange to minimize the potential for scour and associated erosion following project implementation. Impacts associated with these easements would be considered permanent (Figures 3.19-2a and 3.19-2b). Table 3.19-1 presents the direct permanent impacts to natural communities of concern for each of the three build alternatives. The build alternatives would each impact 0.42 acre of disturbed mulefat scrub, 0.2 acre of native grassland, and 3.2 acres of grassland restoration. Impacts to non-native grassland would vary between 172.9 and 183.6 acres, depending on the build alternative. Impacts would also occur to tamarisk scrub, non-native vegetation, disturbed habitat, and developed areas under each of the build alternatives (Table 3.19-1), but these communities are either not natural or are not of concern.

**Table 3.19-1**
**IMPACT SUMMARY FOR NATURAL COMMUNITIES**

| Community | Impacted Acreage by Alternative (Acres)[1] | | |
|---|---|---|---|
| | Two Interchange[2] | One Interchange | No Interchange |
| **Natural Communities of Concern** | | | |
| Vernal Pool | 0.00 | 0.00 | 0.00 |
| Vernal Pool Watershed | 0.00 | 0.00 | 0.00 |
| Basin with Fairy Shrimp | 0.00 | 0.00 | 0.00 |
| Freshwater Marsh | 0.00 | 0.00 | 0.00 |
| Mule Fat Scrub – Disturbed | 0.42 | 0.42 | 0.42 |
| Disturbed Wetland | 0.00 | 0.00 | 0.00 |
| Diegan Coastal Sage Scrub (Including Disturbed and Restoration) | 0.00 | 0.00 | 0.00 |
| Native Grassland | 0.2 | 0.2 | 0.2 |
| Non-native Grassland | 179.8 | 184.4 | 173.7 |
| Non-native Grassland – Disturbed | 0.00 | 0.00 | 0.00 |
| Grassland Restoration | 3.2 | 3.2 | 3.2 |
| **Total of Communities of Concern** | **183.62** | **188.22** | **177.52** |
| **Other Communities** | | | |
| Tamarisk Scrub | 0.08 | 0.08 | 0.08 |
| Non-native Vegetation | 0.2 | 0.3 | 0.2 |
| Disturbed Habitat | 31.31 | 28.51 | 26.31 |
| Developed | 12.2 | 13.2 | 5.2 |
| **Total of Other Communities** | **43.79** | **42.39** | **31.79** |
| **Total Acreage** | **227.41** | **230.61** | **209.31** |

Note: Impacts do not include those within the SR-905 approved FEIS/FEIR limits of disturbance.

[1] Upland habitats are rounded to the nearest 0.1 acre; wetland habitats are rounded to the nearest 0.01 acre. Total acreage includes 0.91 acre of impacts associated with easements outside of the proposed project R/W (described above), which are considered permanent impacts. Therefore, all project impacts would be permanent. Freshwater marsh, mule fat scrub-disturbed, and disturbed wetland are discussed in Section 3.20, Wetlands and Other Waters.

[2] An additional 19.6 acres of non-native grassland would be impacted under the Siempre Viva Road Full Interchange Variation of this alternative.

Source: HELIX 2010d

The direct impacts to natural communities would be unchanged under each of the project variations, with the exception of the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative. Under this variation, an additional 19.6 acres of non-native grassland would be impacted. The impact areas associated with the remaining variations would all occur within developed areas or within the approved/developing SR-905 R/W, such that no additional impacts to natural communities would result. This includes the proposed 46-foot Median Variation, which would impact additional developed land east of Sanyo Avenue, and the proposed SR-905/SR-125/SR-11 Interchange variations would impact more of the existing highway R/W, which does not contain natural communities or natural communities of concern.

Because natural communities of concern are: (1) considered rare within the region or sensitive by CDFG (Holland 1986) and/or (2) support special status plants or animals protected under the federal and/or state ESAs, impacts to them must be avoided, minimized, and/or mitigated. Avoidance and minimization efforts and/or mitigation for impacts to natural communities of concern are described in Section 3.19.4.

*Wildlife Corridors and Habitat Fragmentation*

The BSA does not occur within a corridor for regional wildlife movement; and the eastern portion of the BSA only provides for local movement of mammals for access to resources such as food, water, and minimal shelter. Furthermore, such movement is limited due to the lack of good vegetative cover, the impediment of the U.S. - Mexico international border fencing, and the high level of border patrol, military, off-highway vehicle, and other human activity (e.g., utility or other contractor activity) that occurs around the clock. While the proposed project may affect local wildlife movement in the eastern portion of the BSA, the impact is expected to be minimal, and most local wildlife movement is expected to remain east of the BSA on land that provides greater vegetative cover and has greater topographic variation (i.e., canyons and hills).

Some wildlife may use the BSA and areas to the south and west of the BSA for foraging in spite of the lack of connectivity. Certain sensitive species are known to be present in this area, including burrowing owl and San Diego and Riverside fairy shrimp. While the proposed project would break up the connection between the area south and west of the BSA and habitat to the east of the BSA, this would be a temporary, short-term impact until the active industrial development proposals in that area are implemented (assuming SR-11 and the Otay Mesa East POE are constructed first). In addition, wildlife approaching the project from the east would generally be restricted from entering the R/W due to the six-foot high chain link fencing that would be installed at the edge of the R/W as part of the proposed project. Wildlife would likely turn back toward the east in this situation.

Due to the absence of habitat south of the U.S. - Mexico border as well as the presence of the border fence, virtually no habitat connectivity exists to the south of the BSA and impacts would not be anticipated.

On balance, project impacts to wildlife corridors and habitat fragmentation would not be substantial.

Indirect Impacts

The proposed western edge of the POE was shifted to the east to avoid direct and indirect impacts to the vernal pool and its watershed that are located within the BSA; therefore, no indirect impacts would occur to this habitat. As shown on Figure 3.19-4, a privately owned preserve parcel abuts SR-905 southeast of the interchange at La Media Road. In addition, sensitive habitats abut much of the proposed SR-11, POE, and CVEF R/W. There is the potential for indirect impacts to these natural communities during project

construction due to encroachment by construction personnel and their pets; placement of construction equipment, materials or debris; and siltation/runoff of contaminants from the construction site.

It should be noted that most of the remaining land immediately surrounding the proposed project is developed or planned for development with industrial uses, with no areas currently designated for open space (Figure 3.1-2). A number of proposed developments surround the project (Table 3.1-1and Figure 3.27-2), including the Otay Business Park to the west of the POE that would remove the subject vernal pool.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to natural communities would result.

### 3.19.4 Avoidance, Minimization and/or Mitigation Measures

This section describes efforts that have been made to avoid or minimize impacts to natural communities of concern. Where impacts could not be avoided or minimized, this section describes the mitigation proposed to compensate for those impacts.

**Build Alternatives and Variations**

Avoidance and Minimization Efforts

The SR-11 and Otay Mesa East POE Final PEIR/PEIS (Caltrans 2008a) evaluated two alternative project locations: the Western Alternative and Central Alternative. An Eastern Alternative was also considered but was withdrawn before preparation of the Draft PEIR/PEIS because it would have had much greater impacts to biological resources than either the Western or Central alternatives. Based on the results of the analysis in the Final PEIR/PEIS, the FHWA selected the Western Alternative as the preferred location for SR-11 and the Otay Mesa East POE as stated in its ROD (FHWA 2008). The FHWA determined, with support of the resource agencies, that the Western Alternative would require fewer acres of new R/W and would impact fewer biological resources than the Central Alternative. Thus, the selection of the Western Alternative resulted in the avoidance of and minimization of biological resources impacts.

For the Tier II build alternatives, the design of the project elements has been substantially refined to accommodate required traffic movements for the interchanges, drainage facilities and grading. During this design process, every effort was made to minimize impacts to sensitive biological resources. The irregular shape of the proposed POE is a result of these considerations, as it was designed to avoid/minimize impacts to Diegan coastal sage scrub and Waters of the U.S. to the northeast and the vernal pool to the west. No additional avoidance or minimization efforts were determined feasible for the communities of concern considered herein (i.e., native grassland, non-native grassland, non-native grassland-disturbed, and grassland restoration; vernal pool is discussed separately below), because of their locations within the necessary R/W, and the presence of non-native grassland in much of the area surrounding the project, such that any potential alternative locations would also impact this habitat.

Selection of the Western Alternative avoided or minimized impacts to wildlife movement that is expected to occur on land east of the BSA. Selection of this alternative also avoided impacts to conserved lands east of the BSA. The proposed project's effect on local wildlife movement is expected to be minimal; most local wildlife movement is expected to remain east of the BSA; and there is virtually no habitat connectivity from the BSA south to the U.S. - Mexico border (and no connectivity to Mexico). Therefore, no mitigation measures are proposed for wildlife corridors or habitat fragmentation.

The proposed western edge of the POE was shifted to the east to avoid direct impacts to the vernal pool and its watershed in the BSA. Indirect impacts could occur during project construction, however, to the privately owned preserve land south of SR-905 at La Media Road, and to other sensitive natural communities that abut the existing and proposed R/W associated with the proposed project. To address potential indirect impacts during construction, the project grading/construction limits shall be clearly delineated with orange construction fencing and silt fencing or fiber rolls to ensure that construction activity remains within the defined limits of work. Pets shall be prohibited at the construction site. A qualified biologist shall attend a pre-construction meeting and inspect the delineated areas prior to the initiation of vegetation clearing/grading and during regularly scheduled construction monitoring visits. The construction-related water quality measures listed in Section 3.12.4 would also serve to mitigate potential impacts related to discharge of silt and construction-related contaminants into adjacent natural communities.

Mitigation Measures

For impacts to natural communities of concern from the proposed project that could not be avoided (presented in Table 3.19-1), mitigation is proposed as shown in, and following, Table 3.19-2. Freshwater marsh, mule fat scrub-disturbed, and disturbed wetland are discussed in Section 3.20, *Wetlands and Other Waters*.

Mitigation for impacts to natural communities of concern is proposed to occur off site on three Lonestar parcels acquired by Caltrans on Otay Mesa. These parcels total approximately 184 acres and are located north/northeast of Brown Field, east and west of SR-125, and south of the Otay River Valley.

The Lonestar parcels support approximately 173.0 acres of non-native grassland, approximately 8.0 acres of Diegan coastal sage scrub, approximately 0.5 acre of eucalyptus woodland, an approximately 0.25-acre stock pond, approximately 0.85 acre of vernal pool, and approximately 0.1 acre of unvegetated basins (HELIX 2009a). The majority of the parcels is within the City MHPA; some of it is also designated as MSCP BRCA.

Prior to commencement of grading, the off-site mitigation parcels would be placed in a conservation easement. Interim management of the mitigation parcels would be the responsibility of Caltrans. Long-term management of the Lonestar parcels is expected to be conducted by the County of San Diego Department of Parks and Recreation. In the event that the County of San Diego Department of Parks and Recreation is unable to provide long-term management for the parcels, Caltrans would manage the parcels until it is transferred to an appropriate agency to manage and preserve the wildlife habitat in perpetuity. This would be done through a deed with restrictive covenants to protect and maintain the present and future uses of the parcels. These restrictive covenants would include a list of prohibitive uses that are inconsistent with the conservation purposes of the parcels. The parcels would be used for proposed project mitigation and mitigation for other projects, as applicable, to preserve habitat and to create, restore, and enhance vernal pool habitat. Should the Lonestar parcels prove to be infeasible for any reason, alternate land will be acquired by Caltrans as close as possible to the proposed project, with the concurrence of the resource agencies.

*Native Grassland*

Proposed mitigation for the permanent impact to 0.2 acre of native grassland would occur through the restoration of native grassland at a 2:1 ratio where non-native grassland presently occurs (Table 3.19-2). Restoration of native grassland would occur through the dethatching of non-native grassland and subsequent planting of native grasses on the western Lonestar parcel. A mitigation plan for restoration of

this community would be prepared that identifies the location for restoration, responsible parties, methods of implementation, maintenance and monitoring requirements, final success criteria, and contingency measures.

*Non-Native Grassland*

Proposed mitigation for permanent impacts of up to 199.4 acres of non-native grassland (i.e., if the Two Interchange Alternative with the Siempre Viva Road Full Interchange Variation is selected) is through preservation of non-native grassland at a 1:1 ratio (Table 3.19-2). Since the grassland in the R/W is considered occupied by the burrowing owl, the mitigation land should also be burrowing owl habitat. Preservation of non-native grassland on the Lonestar parcels is proposed to satisfy this mitigation. It is acknowledged that the Lonestar parcels support approximately 173 acres of non-native grassland, and that additional grassland may be required. Caltrans will consult with the resource agencies to devise an acceptable strategy to compensate for any shortage in the required mitigation.

*Grassland Restoration*

Proposed mitigation for permanent impacts to 3.2 acres of grassland restoration would occur through preservation of non-native grassland at a 1:1 ratio (Table 3.19-2). Therefore, 3.2 acres of mitigation is proposed. Since the grassland restoration in the R/W is considered occupied by the burrowing owl, the mitigation land should also be burrowing owl habitat. Preservation of non-native grassland on the Lonestar parcels (or equivalent mitigation parcel) would satisfy this mitigation.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization, or mitigation measures would be required.

**Table 3.19-2**
**PROPOSED MITIGATION SUMMARY FOR DIRECT IMPACTS TO NATURAL COMMUNITIES OF CONCERN**

| Natural Community | Total Impacted Acreage by Alternative (Acres) | | | Mitigation Ratio[2] | Proposed Mitigation by Alternative (Acres) | | |
|---|---|---|---|---|---|---|---|
| | Two Interchange[1] | One Interchange | No Interchange | | Two Interchange | One Interchange | No Interchange |
| Native Grassland (dominated by coastal saltgrass) | 0.2 | 0.2 | 0.2 | 2:1 | 0.4 restoration of NNG with native grassland | 0.4 restoration of NNG with native grassland | 0.4 restoration of NNG with native grassland |
| Non-native Grassland | 179.8 | 184.4 | 173.7 | 1:1 | 179.8 in-kind preservation[3] | 184.4 in-kind preservation[3] | 173.7 in-kind preservation[3] |
| Grassland Restoration | 3.2 | 3.2 | 3.2 | 1:1 | 3.2 preservation of non-native grassland[3] | 3.2 preservation of non-native grassland[3] | 3.2 preservation of non-native grassland[3] |

Note: Impacts do not include those within the SR-905 approved FEIS/FEIR limits of disturbance
[1] An additional 19.6 acres of non-native grassland (NNG) would be impacted by the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative.
[2] Per County MSCP Tiers/Ratios: impacts are not located in an MSCP BRCA or the City MHPA, but the proposed mitigation would be in such areas.
[3] To also mitigate for habitat loss for the burrowing owl and other grassland-dependent special status species.

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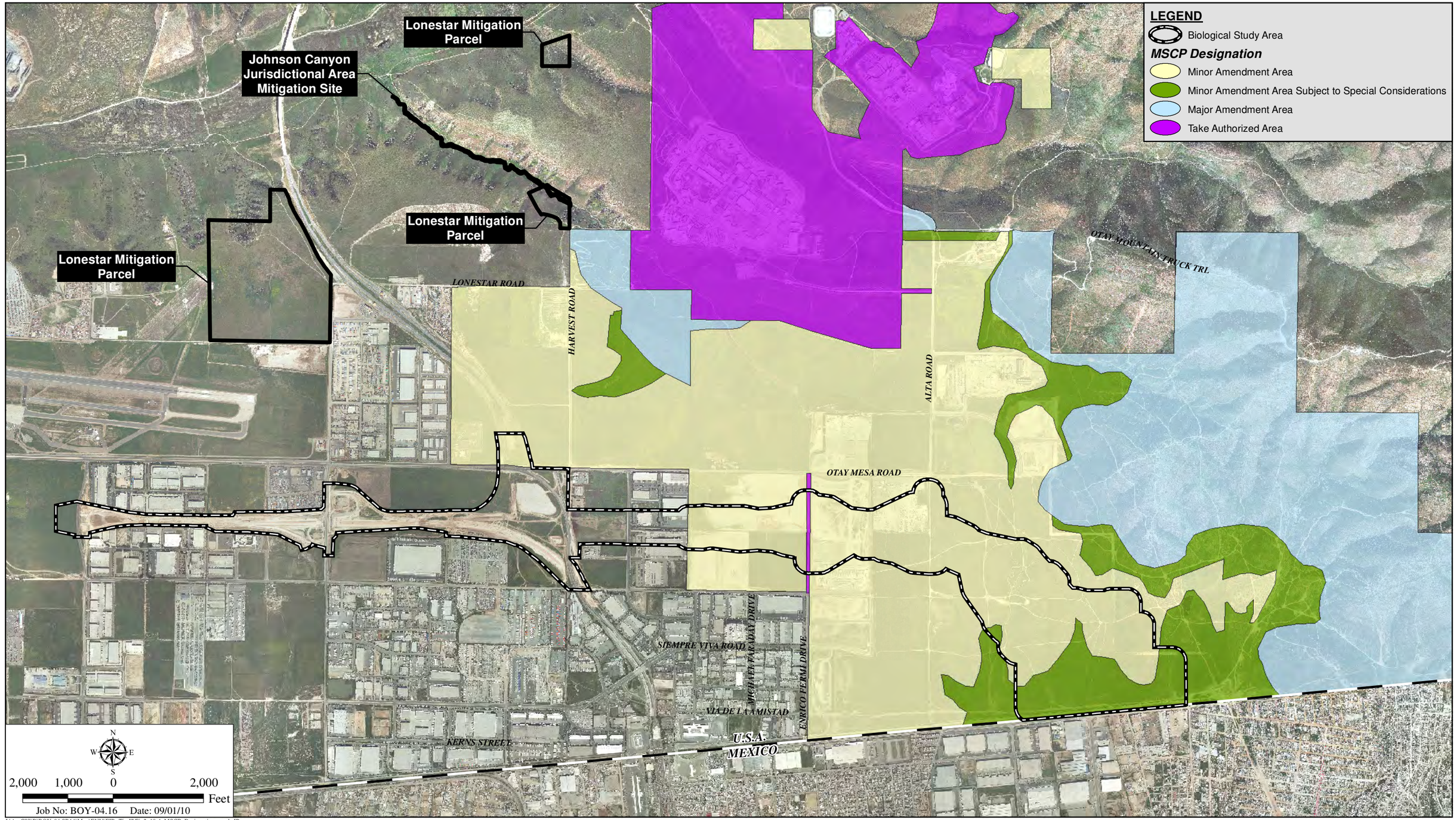


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# MSCP Designations and Proposed Mitigation Sites

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.19-1

Otay Mesa Road
Harvest Road
Piper Ranch Road
Sanyo Avenue
Airway Road
Heinrich Hertz Drive
Paseo De Las America
Michael Faraday Drive
Enrico Fermi Drive
Siempre Viva Road
Match to Figure 3.19-2b

Biological Study Area
Non-native Grassland
Disturbed Habitat
Developed
Additional Project Study Area Parcels Owned By Caltrans
SR-905 Approved FEIR/FEIS Limits of Disturbance within Project Area
Impacts - Two Interchange Alternative
Impacts - One Interchange Alternative
Impacts - No Interchange Alternative

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Job No: BOY-04.16 Date: 06/17/10

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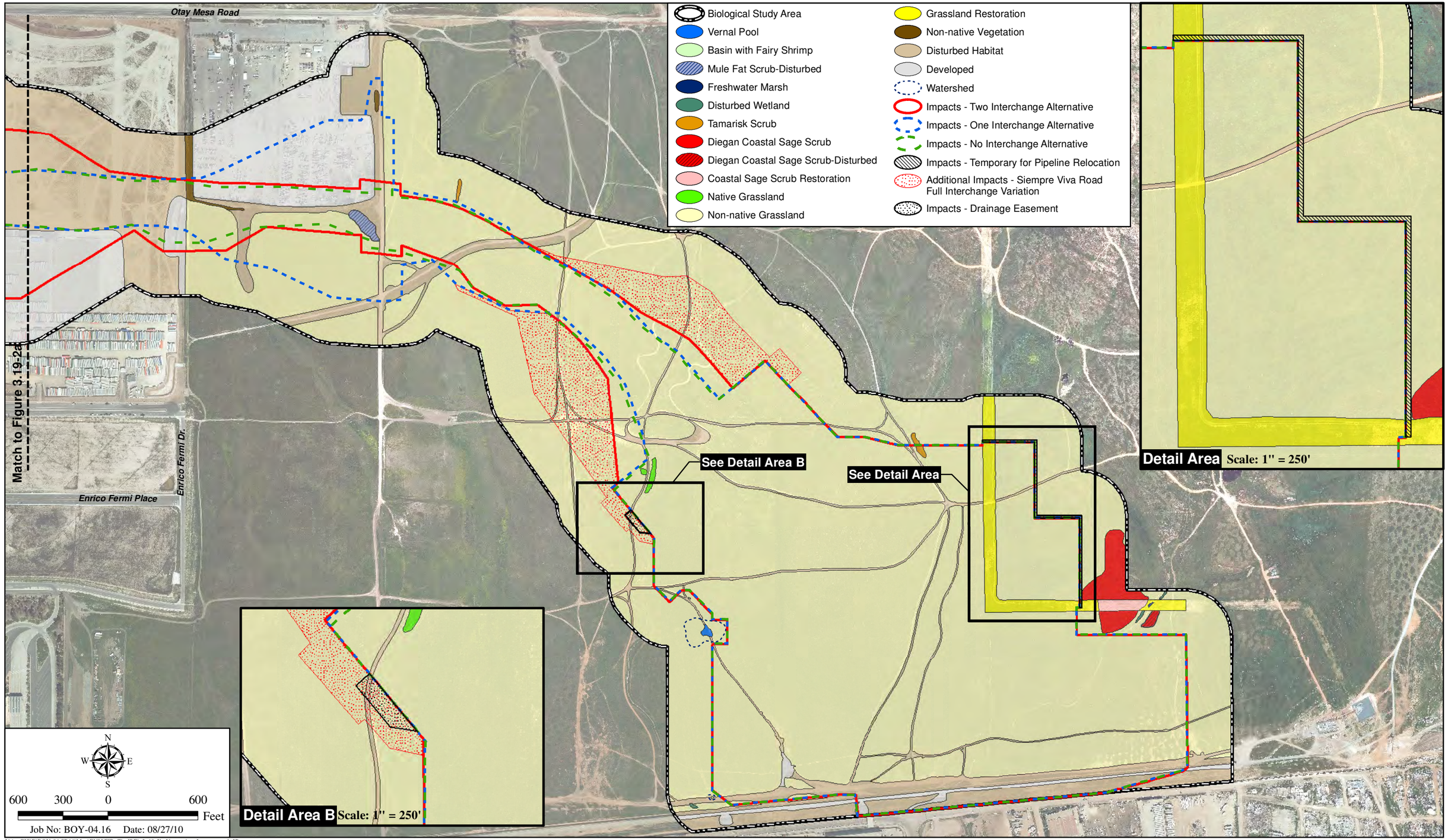
# Vegetation/Impacts Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

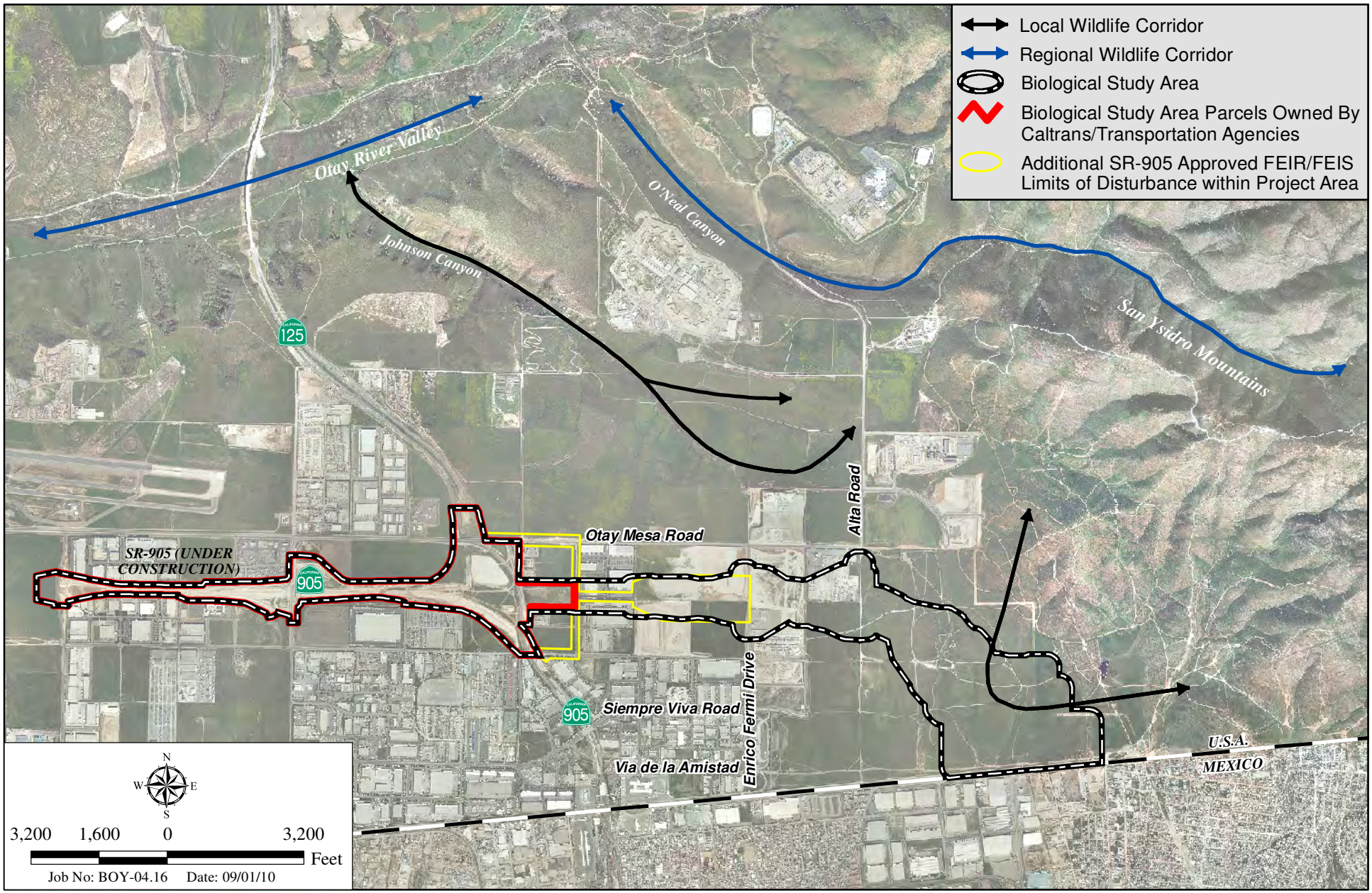
Figure 3.19-2a




# Vegetation/Impacts Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.19-2b

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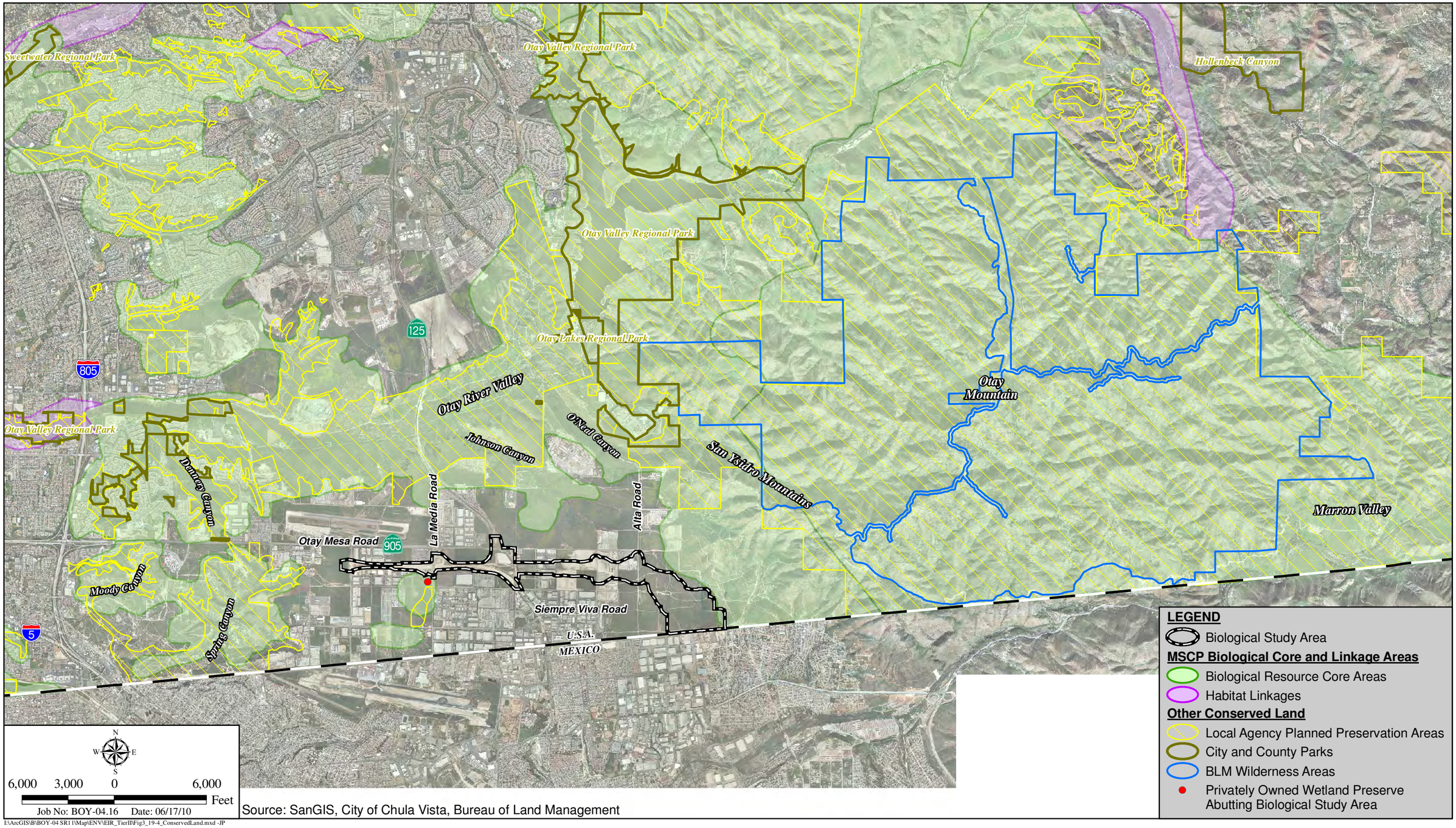
# Wildlife Corridors

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.19-3




Source: SanGIS, City of Chula Vista, Bureau of Land Management

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# Conserved Land

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.19-4

# 3.20 WETLANDS AND OTHER WATERS

This section addresses wetlands and other waters, including regulatory requirements associated with potential impacts, as well as general avoidance, minimization and/or mitigation measures.

## 3.20.1 Regulatory Setting

At the federal level, the CWA (33 USC 1344) is the primary law regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into waters of the WUS, including wetlands. WUS include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the USACE with oversight by the EPA.

The EO for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds that: (1) that there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the CDFG and the RWQCB. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by an LSAA obtained from the CDFG.

RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the CWA. See Section 3.12, *Water Quality and Storm Water Runoff*, for additional details.

## 3.20.2 Affected Environment

An NES was completed for the proposed project (HELIX 2010d) that addressed aquatic resources present in the BSA. In addition, a *Jurisdictional Delineation Report* was completed for the proposed project (HELIX 2009b) as referenced in Section 2.2 and Chapter 6.0 of the NES. The USACE has indicated that it will accept the jurisdictional delineation.

The western portion of the BSA supports grassland, disturbed habitat, and developed land (Figure 3.19-2a). The eastern portion of the BSA supports grassland, riparian habitats, wetland habitats, and scrub communities (Figure 3.19-2b) and consists of gently undulating hills and mesas with three ephemeral

drainages that convey flows south to Mexico. Portions of Enrico Fermi Drive and Alta Road occur within the BSA. In addition, several dirt roads cross the grasslands in the eastern portion of the BSA and are regularly traveled by CBP and off-highway vehicles (OHVs). General drainage in the BSA is primarily to the south for the eastern half of the BSA and to the west for the western half of the BSA.

Five aquatic habitat types occur in the BSA that are under the jurisdiction of the USACE and/or CDFG: mule fat scrub-disturbed, freshwater marsh, tamarisk scrub, disturbed wetland, and non-wetland WUS/CDFG streambed (Figures 3.20-1, *USACE Jurisdictional Areas/Impacts*, and Figure 3.20-2, *CDFG Jurisdictional Areas/Impacts*).

Areas under USACE jurisdiction in the BSA consist of freshwater marsh and disturbed wetland that are wetlands and Drainages A, B, and C that are non-wetland WUS (Figure 3.20-1).

Areas under CDFG jurisdiction consist of mule fat scrub-disturbed, freshwater marsh, tamarisk scrub, and disturbed wetland that are wetlands, as well as Streambeds A through E (Figure 3.20-2).

Descriptions of these resources are provided below.

**Freshwater Marsh**

Freshwater marsh is dominated by perennial emergent monocots that can reach a height between 12 and 15 feet. This vegetation type occurs along the coast, and in coastal valleys near river mouths and around the margins of lakes and springs. These areas are permanently flooded by freshwater yet lack a significant current (Holland 1986). Freshwater marsh occurs in the eastern portion of the BSA (Figures 3.19-2b, 3.20-1, and 3.20-2). Species observed in the freshwater marsh include broad-leaved cattail (*Typha latifolia*), slender creeping spike-rush (*Eleocharis montevidensis*), and rabbitsfoot grass (*Polypogon monspeliensis*). Wetland habitats are naturally limited, and remaining acreages can provide important island habitats for migrant birds. Other important wetland habitat functions include: flood conveyance, flood storage, and sediment control; providing surface water and insects for fish, amphibians, and birds; providing spawning grounds for aquatic fauna; providing habitat for rare and endangered species; and controlling water quality and erosion. Wetland habitat alteration in southern California has occurred because of filling, draining, vegetation clearing, diverting water, impounding water, increasing or decreasing nutrient levels, channelizing, increasing sediment loading, lowering of water tables, human recreational activities, gravel mining, proliferation of exotic species, grazing, and urban development (Bowler 1990).

**Mule Fat Scrub – Disturbed**

Mule fat scrub is a shrubby, riparian scrub community dominated by mule fat (*Baccharis salicifolia)* and interspersed with shrubby willows (*Salix* spp.). Mule fat scrub-disturbed in the BSA is considered "disturbed" because it also supports a high percentage of cover by non-native species including tamarisk (*Tamarix* sp.), scarlet pimpernel (*Anagallis arvensis*), mustard, bull thistle (*Cirsium vulgare*), bristly ox-tongue (*Picris echioides*), and prickly lettuce (*Lactuca serriola*). Mule fat scrub-disturbed occurs just south of the vehicle auction yard at Otay Mesa Road and Alta Road (Figures 3.19-2b and 3.20-2). Riparian communities are naturally limited and situated along stream courses and adjacent stream banks. They perform all of the important habitat functions of wetlands (described above for freshwater marsh), and they can provide corridors for wildlife movement. Riparian habitat alteration in southern California has occurred for the same reasons as those listed above for freshwater marsh.

### Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species but also may support willows, salt bushes (*Atriplex* spp.), and coastal salt grass. This vegetation community occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table that is too far below the surface for many other species to access. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage (Holland 1986). Tamarisk scrub occurs in two patches in the eastern portion of the BSA (Figures 3.19-2b and 3.20-2).

### Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or have undergone periodic disturbances. The composition of disturbed wetland is highly variable based on the hydrology, soils, and type and frequency of disturbance. Typical species observed in this community in the BSA include rabbitsfoot grass, curly dock (*Rumex crispus*), and Italian ryegrass. Disturbed wetland occurs along the U.S. - Mexico international border in the eastern portion of the BSA (Figures 3.19-2b and 3.20-2). Disturbed wetland is naturally limited, performs important wetland functions, and has been altered in southern California as described above for freshwater marsh.

### Non-wetland Waters of the U.S./CDFG Streambed

The BSA supports portions of several unnamed, ephemeral drainages that are USACE non-wetland WUS and/or CDFG streambeds (Figures 3.20-1 and 3.20-2). Drainages A, B, and C are located in the eastern portion of the BSA; all three drainages convey flows south to the U.S. - Mexico border and originate north of the BSA in the San Ysidro Mountains. Drainages A and B are continuous across the BSA, ranging in width from one to six feet. Drainage C exhibits a discontinuous ordinary high water mark (OHWM), comprising two reaches within the BSA, and is narrower than Drainages A and B, with widths ranging from less than one foot to one foot. All three of these drainages are USACE and CDFG jurisdictional.

Drainages D and E are located in the central portion of the BSA (Figure 3.20-2). Drainage D averages one foot wide and exhibits an OHWM only for a short distance before disappearing into the surrounding non-native grassland. A recently constructed outfall structure just north of this drainage has likely contributed to the formation of the OHWM. Drainage D does not have a significant nexus to any traditional navigable waters and is isolated from other WUS; for these reasons, it is not considered jurisdictional to the USACE. It is, however, considered a CDFG streambed because CDFG jurisdiction is not based on connectivity to other habitats downstream. Drainage E in the BSA consists of one reach ranging from one foot to five feet wide. It receives storm water runoff from a culvert outlet on the south side of the vehicle auction yard as well as irrigation runoff from adjacent landscaping. Although it exhibits an OHWM in its upper reaches, the drainage quickly fades into non-native grassland in the central portion of the BSA and no longer exhibits a discernible OHWM. This drainage is considered an isolated feature that is not jurisdictional to the USACE. It is, however, a CDFG streambed.

## 3.20.3 Environmental Consequences

### Alternatives Evaluated Previously

As described in Chapter 2.0 and discussed in Section 3.20.4, a wide range of alternatives and variations have been evaluated in developing the proposed project alternatives analyzed below. The Phase I PEIR/PEIS focused on selecting generalized locations for proposed SR-11 and the POE site, analyzing

the Western and Central alternatives, Phase I program alternatives, as well as the No Build Alternative. An Eastern Alternative was previously studied and eliminated as a result of anticipated impacts to sensitive biological and cultural resources. Please refer to Section 2.3 for additional discussion of previously evaluated and rejected alternatives. Based on data provided in the PEIR/PEIS and information received during public review, the Phase I ROD selected the Western Alternative as the preferred SR-11 corridor and POE location over the Central Alternative. The build alternatives described in Section 2.2 of this EIR/EIS are based on the Phase I Western Alternative.

All of these alternatives and variations were considered during the process of developing the proposed project alternatives analyzed in this Tier II EIR/EIS, but were eliminated from further consideration for reasons outlined in Section 2.3 of this document, including additional biological impacts/mitigation requirements.

**Build Alternatives and Variations**

The following analysis of potential impacts to wetlands and other waters addresses all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or without the associated variations.

Table 3.20-1 and Figures 3.20-1 and 3.20-2 present the impacts to wetlands and other waters under the jurisdiction of the USACE and/or CDFG for each of the three Tier II build alternatives. All impacts would be permanent.

None of the proposed project variations would result in changes to the identified impacts from any of the three build alternatives. The variations would all occur within developed areas or within approved/developed highway interchange R/W.

**Table 3.20-1**
**IMPACT SUMMARY FOR JURISDICTIONAL FEATURES[1]**

| Resource | Impacted Acreage by Alternative[2] | | |
|---|---|---|---|
| | **Two Interchange** | **One Interchange** | **No Interchange** |
| **CDFG Jurisdictional Areas (Acres)** | | | |
| Mule Fat Scrub-Disturbed | 0.42 | 0.42 | 0.42 |
| Streambed | 0.26[3] | 0.27 | 0.25 |
| **Total Acreage** | **0.68** | **0.69** | **0.67** |
| **USACE Jurisdictional Areas (Acres)** | | | |
| Drainage A – WUS | 0.11 | 0.11 | 0.11 |
| Drainage B – WUS | 0.07[3] | 0.06 | 0.06 |
| Drainage C – WUS | 0.03 | 0.03 | 0.03 |
| **Total Acreage** | **0.21** | **0.20** | **0.20** |

**Table 3.20-1 (cont.)**
**IMPACT SUMMARY FOR JURISDICTIONAL FEATURES**

| Resource | Impacted Acreage by Alternative[2] | | |
|---|---|---|---|
| | Two Interchange | One Interchange | No Interchange |
| **USACE Jurisdictional Drainages (Linear Feet)** | | | |
| Drainage A – WUS | 1,804 | 1,804 | 1,804 |
| Drainage B – WUS | 1,377[3] | 1,263 | 1,247 |
| Drainage C – WUS | 1,340 | 1,340 | 1,340 |
| **Total Linear Feet** | **4,521** | **4,407** | **4,391** |

Note: Impacts do not include previously permitted impacts from the SR-905 EIR/EIS. All reported impact numbers include 0.01 acre and 165 linear feet of impact to Drainage B, associated with a proposed easement outside project R/W. Impacts associated with the easement would be considered permanent. Therefore, all project impacts would be permanent.

[1] USACE jurisdictional areas impacted overlap completely with CDFG jurisdictional areas impacted, so the total acreage of CDFG jurisdiction represents the total area of CDFG and USACE jurisdiction impacted.

[2] Wetland habitats are rounded to the nearest 0.01 acre. Implementation of any of the proposed project variations would not change the impacts presented in this table.

[3] An additional 1,500 square feet (0.03 acre) of CDFG Streambed and USACE jurisdictional area, representing an additional 641 linear feet of USACE jurisdictional drainage within Drainage B, would be impacted with implementation of the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative.

The total impact to USACE jurisdictional areas for the Two Interchange Alternative would be 0.21 acre and 4,521 linear feet. The impact to CDFG jurisdictional areas would be 0.68 acre (the USACE jurisdiction is completely contained within the larger area of CDFG jurisdiction).

The total impact to USACE jurisdictional areas for the One Interchange Alternative would be 0.20 acre and 4,407 linear feet. The total impact to CDFG jurisdictional areas would be 0.69 acre (the USACE jurisdiction is completely contained within the larger area of CDFG jurisdiction).

The total impact to USACE jurisdictional areas for the No Interchange Alternative would be 0.20 acre and 4,391 linear feet, while the impact to CDFG jurisdiction would be 0.67 acre (again, the USACE jurisdiction is completely contained within the larger area of CDFG jurisdiction).

The mule fat scrub-disturbed that would be impacted is a small, isolated wetland habitat supporting a high percentage of non-native species and is of relatively low quality. Due to its small size and distance from other wetland/riparian habitats, it would not be expected to support any listed or special status wetland/riparian-dependent animal species. The primary functions of this habitat include potential nesting habitat for commonly occurring birds and cover for small mammals. Despite its low quality and isolation from other wetland habitats, impacts to the mule fat scrub-disturbed could affect the habitat functions provided by this habitat, but would have only a minimal effect on overall functions and values of wetland habitat remaining in the Otay region. The mule fat scrub-disturbed is of low value to society in terms of common uses such as birdwatching, photography, and environmental education because of its small size, disturbed nature, and location on private land.

The USACE non-wetland WUS and CDFG streambeds are narrow, primarily ephemeral features that convey flows only following rain events and do not support hydrophytic vegetation. The drainages are of average quality and would not be expected to contribute substantially to life cycle functions of aquatic invertebrates or other water-dependent species. Other functions may include a minor contribution to transportation of nutrients to downstream waters (including cross-border flows), which would be minimally impacted by the proposed project.

As shown on Figure 3.19-4, a privately owned preserve parcel, which is known to contain wetlands, abuts SR-905 southeast of the interchange at La Media Road. Caltrans has also installed 3.28 acres of southern willow scrub/freshwater marsh mitigation with a 2.96-acre coastal sage scrub buffer at the eastbound off-ramp from SR-905 to La Media Road. In addition, jurisdictional waters abut other areas of the proposed SR-11, POE, and CVEF R/W. There is the potential for indirect impacts to these wetlands during project construction due to encroachment by construction personnel and their pets; placement of construction materials, equipment or debris; and siltation/runoff of contaminants from the construction site.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to wetlands and other waters would result.

**Documentation of Agency Coordination**

Since there are WUS in the BSA, the USACE, as a Cooperating Agency under SAFETEA-LU, provided a comment letter (dated October 23, 2009) on the purpose and need statement and project alternatives. (See Chapter 5.0 for a more detailed discussion of agency coordination.) In this letter, the USACE stated that impacts to vernal pools require an Individual Permit; however, the proposed project would avoid impacts to the vernal pool in the BSA (see Section 3.19.4).

Federal Permitting

Impacts equal to or less than 0.5 acre of WUS are generally processed with a Nationwide Permit (NWP), and impacts greater than 0.5 acre of WUS are processed with an Individual Permit from the USACE. Depending on the thresholds specified by the type of permit required (e.g., NWP-14 for linear transportation projects or NWP-39 for institutional or commercial developments), the USACE may also require an Individual Permit for projects impacting greater than 300 linear feet of drainage, irrespective of the acreage affected, or it may issue a waiver for such impacts.

A CWA Section 401 Water Quality Certification administered by the State Water Resources Control Board must be issued prior to any 404 Permit. All areas considered USACE jurisdictional would be covered under the 401 Certification.

State Permitting

The CDFG regulates alterations or impacts to streambeds or lakes under California Fish and Game Code 1602. The CDFG requires a LSAA for projects that will divert or obstruct the natural flow of water; change the bed, channel, or bank of any stream; or use any material from a streambed. The LSAA is a contract between the applicant and CDFG stating what activities can occur in the riparian zone and stream course (California Association of Resource Conservation Districts 2002). Any impacts to CDFG habitat would require an LSAA.

**Least Environmentally Damaging Practicable Alternative**

Caltrans began to study alternative alignments for SR-11 in approximately 1999, and this process has previously resulted in the selection of the current location for SR-11 and the POE as the least environmentally damaging practicable alternative (LEDPA) in the Phase I environmental process, with the support of the USACE and CDFG. The various alternative locations that have been considered and rejected over the past 10 years are described in Section 2.3, along with the reasons each alternative was rejected. The use of Airway, Otay Mesa or Siempre Viva roads was ruled out as infeasible because of the poor mobility and increased congestion to local streets that would occur from the high volume of truck traffic. Three potential alignments were initially identified for SR-11, corresponding to three alternative

POE locations. These were titled the Western, Central and Eastern alternatives. The Eastern Alternative was eliminated during preliminary environmental studies as a result of anticipated impacts to vernal pools, Diegan coastal sage scrub, quino habitat, listed plant species, and cultural resources. A Phase I PEIR/PEIS was then prepared to evaluate the Western and Central alternatives, as well as the No Action Alternative. This document was certified on August 6, 2008, and the Phase I ROD was approved on October 6, 2008. Based on data provided in the PEIR/PEIS and information received during public review, the Phase I ROD selected the Western Alternative as the preferred SR-11 corridor and POE location over the Central Alternative for the following reasons:

- It would fulfill the Phase I program purpose and need
- It would exhibit a lower potential for Tier II impacts to listed/sensitive biological resources (i.e. it was the biologically preferred alternative)
- It would have a lower potential for land use impacts
- It was preferred by most of the various Tier II cooperating and participating agencies, including the resource agencies
- It would be the more cost-effective solution to the program purpose and need

Thus, the Western Alternative was selected as the Phase I LEDPA. A conditional Presidential Permit has been granted for the POE in this location, and route adoption for SR-11 by the California Transportation Commission is pending. Mexico has secured land on the Mexican side of the border to correspond with the selected U.S. location, and Mexico has requested that the U.S. provide a wider area for direct connection of the two POEs. For this reason, and to accommodate a CVEF and necessary grading for the POE, the POE shape was modified and was widened along the border. The western and northeastern boundaries of the POE were selected specifically to avoid impacts to vernal pools and basins with fairy shrimp, as well as Diegan coastal sage scrub, and to minimize impacts to wetlands and non-wetland WUS.

Since this Tier II environmental analysis focuses on alternative designs for the selected Western Alternative location, there is no appreciable difference in the impacts of the Tier II project alternatives to jurisdictional wetlands and other waters. Impacts to such features cannot be avoided because the project location has been set through a prior environmental process, and there are no design alternatives in this location that would further avoid the impacts to wetlands and other waters, beyond the avoidance that has occurred through the prior site selection process and the current Tier II planning process.

### 3.20.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

Avoidance and Minimization Efforts

- The Phase I PEIR/PEIS focused on selecting generalized locations for proposed SR-11 and the POE site, analyzing the Western and Central alternatives, Phase I program alternatives, as well as the No Build Alternative. An Eastern Alternative was previously studied and eliminated as a result of anticipated impacts to sensitive biological and cultural resources (see Section 2.3 of this document).

Based on the Phase I PEIR/PEIS and ROD, the Tier II analysis in this environmental document identifies and evaluates design and operational alternatives for proposed SR-11, the POE, and a related CVEF located adjacent to the POE. The Tier II alternatives are generally located within the boundaries of the

Phase I Western Alternative, for which a conditional Presidential Permit was granted by the U.S. State Department in November 2008. The configurations of both the SR-11 and POE/CVEF sites have been refined during the Tier II scoping process in response to various engineering, planning and environmental considerations**.**

A TSM/TDM Only Alternative was also evaluated as part of the Tier II analysis, along with an additional design variation for the Two Interchange Alternative (as described in Section 2.2.1). A number of design alternatives were also considered for the proposed CVEF involving the use of facilities at the existing Otay Mesa CVEF and the provision of secured access for commercial vehicles from the proposed East Otay Mesa POE.

The alternatives addressed in this Tier II EIR/EIS were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. Under evaluation in this document are three build alternatives (referred to as the Two Interchange, One Interchange, and No Interchange alternatives), with several design/ operational variations and incorporated TSM/TDM measures, as well as the No Build Alternative. None of the variations or TSM/TDM measures would result in changes to the identified impacts to USACE or CDFG jurisdiction from any of the three build alternatives. For all three resulting Tier II build alternatives, The modified boundaries of the POE were selected specifically to avoid impacts to vernal pools and basins with fairy shrimp, as well as Diegan coastal sage scrub, and to minimize impacts to wetlands and non-wetland WUS. No additional avoidance or minimization efforts were determined feasible for USACE and/or CDFG jurisdictional areas because of the locations of these features that are entirely within, or traverse through, the adopted project locations.

To address potential indirect impacts during construction, the project grading/construction limits shall be clearly delineated with orange construction fencing and silt fencing or fiber rolls to ensure that construction activity remains within the defined limits of work. Pets shall be prohibited at the construction site. A qualified biologist shall attend a pre-construction meeting and inspect the delineated areas prior to the initiation of vegetation clearing/grading and during regularly scheduled construction monitoring visits.

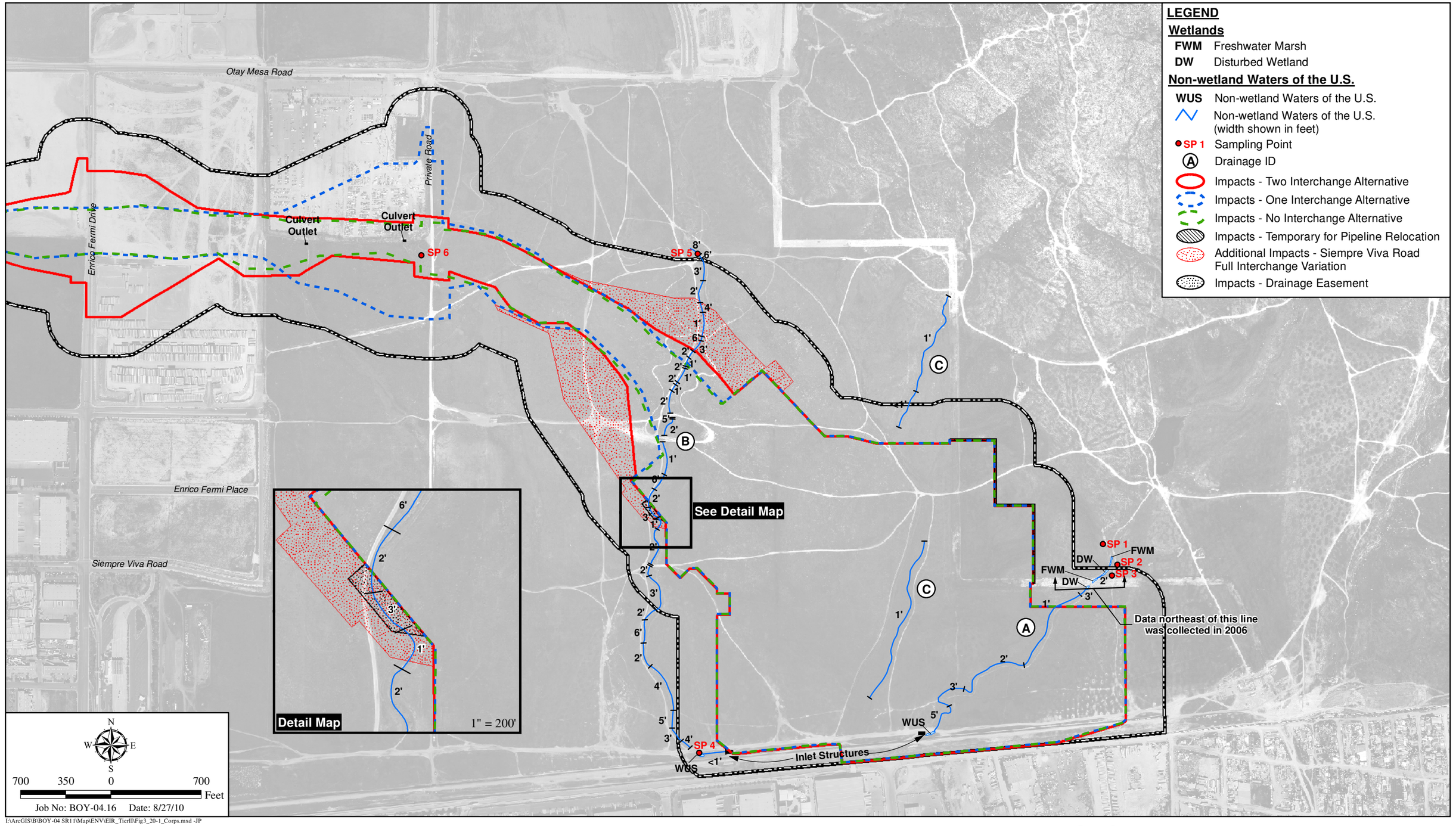
Mitigation Measures

Impacts to USACE and CDFG jurisdictional areas require permitting and mitigation. Proposed mitigation ratios for mule fat scrub-disturbed is 2:1 and proposed mitigation ratios for impacts to USACE non-wetland WUS/CDFG streambed is 1:1. Therefore, the proposed compensatory mitigation for the Two Interchange Alternative is 1.09 acres, the proposed compensatory mitigation for the One Interchange Alternative is 1.10 acres, and the proposed compensatory mitigation for the No Interchange Alternative is 1.08 acres.

Proposed compensatory mitigation is via the restoration and preservation of USACE non-wetland WUS/CDFG streambed at Johnson Canyon, a drainage that extends onto one of the Lonestar parcels and supports jurisdictional features (see Figure 3.19-1). A jurisdictional delineation would be necessary to determine the extent of USACE/CDFG jurisdiction on the Lonestar parcel. Proposed compensatory mitigation would consist of removal of non-native vegetation (primarily tamarisk) and implementation of native vegetation planting and seeding for up to approximately 4,521 linear feet of Johnson Canyon.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

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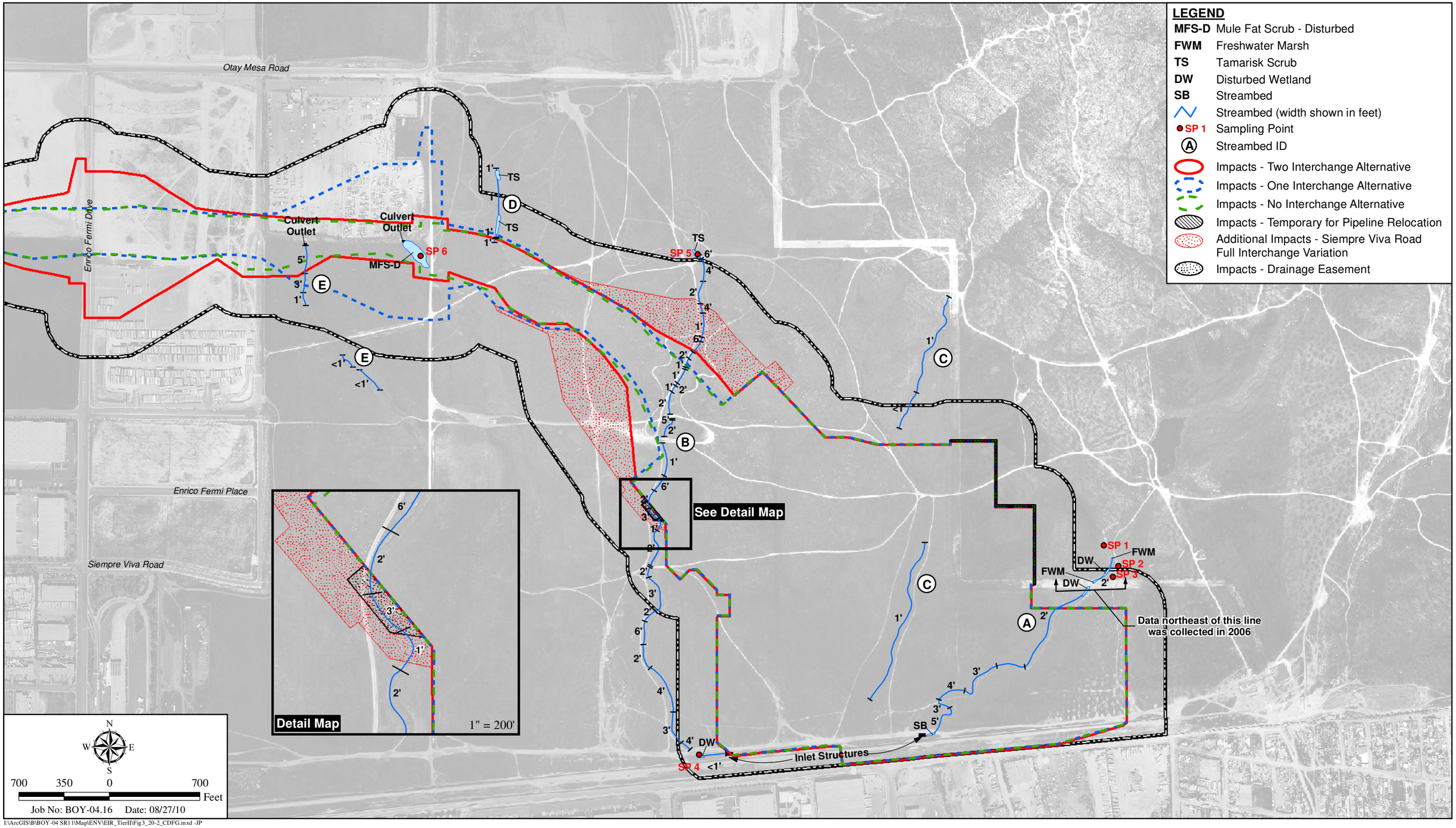
# USACE Jurisdictional Areas/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.20-1




**LEGEND**

| | |
|---|---|
| **MFS-D** | Mule Fat Scrub - Disturbed |
| **FWM** | Freshwater Marsh |
| **TS** | Tamarisk Scrub |
| **DW** | Disturbed Wetland |
| **SB** | Streambed |
| | Streambed (width shown in feet) |
| SP 1 | Sampling Point |
| A | Streambed ID |
| | Impacts - Two Interchange Alternative |
| | Impacts - One Interchange Alternative |
| | Impacts - No Interchange Alternative |
| | Impacts - Temporary for Pipeline Relocation |
| | Additional Impacts - Siempre Viva Road Full Interchange Variation |
| | Impacts - Drainage Easement |

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# CDFG Jurisdictional Areas/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.20-2

# 3.21 PLANT SPECIES

This section addresses special status plant species that are not federally or state listed. Refer to Section 3.23 for a discussion of threatened and endangered plant species, as well as critical habitat.

## 3.21.1 Regulatory Setting

The USFWS and CDFG share regulatory responsibility for the protection of special status plant species. "Special status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species, which are species that are formally listed or proposed for listing as endangered or threatened under the FESA and/or the California Endangered Species Act (CESA). Please see Section 3.23, *Threatened and Endangered Species*, in this document for detailed information regarding these species.

This section of the document discusses all the other special status plant species, potentially including USFWS candidate species, non-listed California Native Plant Society (CNPS) rare and endangered plants, and County MSCP Subarea Plan narrow endemic species.

The regulatory requirements for FESA can be found at USC 16, Section 1531, et seq. (see also 50 CFR Part 402). The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and CEQA PRC, Sections 2100-21177.

## 3.21.2 Affected Environment

An NES for the proposed project (HELIX 2010d) describes the special status plant species that have potential to occur in the BSA and the results of focused special status plant species surveys that were performed in the BSA during the period 2000 to 2009. A compilation of all data collected from these surveys is included on Figures 3.21-1a through 3.21-1d, *Special Status Species/Impacts*. The compiled data was adjusted to eliminate multiple observations (from different years) of the same special status species from the same locations so as not to over-report their presence. Additionally, a list of all plant species observed in 2005, 2006, and 2008/2009 was made and included in Appendix D of the NES.

### Dominant Plant Species

Non-native grassland is the dominant vegetation community in the BSA (approximately 69 percent coverage); therefore, the dominant plant species in the BSA are plants from this community: oats, red brome, ripgut grass, Italian ryegrass, and mustard. Dominant plant species found in other communities in the BSA include broad-leaved cattail, curly dock, rabbitsfoot grass, mule fat, tamarisk, scarlet pimpernel, bull thistle, bristly ox-tongue, California sagebrush, San Diego County viguiera, California buckwheat, coastal saltgrass, filaree, hottentot fig, and Russian thistle. Fourteen (approximately 70 percent) of these species are non-native, and six (approximately 30 percent) of these species are native.

### Special Status Plant Species

Despite the disturbed nature of the majority of the BSA (i.e., it is dominated by a non-native vegetation community), it supports, or has the potential to support, numerous non-listed but special status plant species. Table 3.21-1 presents the special status plant species potentially occurring or known to occur in the BSA.

**Table 3.21-1**
**SPECIAL STATUS PLANT SPECIES POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status[1] | General Habitat Description | Rationale[2] |
|---|---|---|---|---|
| California adolphia | *Adolphia californica* | CNPS List 2.1, County Sensitive | Clay soil in sage scrub; occasionally, the periphery of vernal pools | Detected (2006) |
| San Diego bursage | *Ambrosia chenopodiifolia* | CNPS List 2.1, County Sensitive | Coastal sage scrub; known from only 10 locations in California | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| Orcutt's brodiaea | *Brodiaea orcuttii* | CNPS List 1B.1, County Sensitive | Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools with clay and sometimes serpentine soils | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| Small-flowered morning glory | *Convolvulus simulans* | CNPS List 4.2, County Sensitive | Chaparral, coastal scrub openings and valley/foothill grasslands | Detected (2009) |
| Western dichondra | *Dichondra occidentalis* | CNPS List 4.2, County Sensitive | Southern mixed chaparral, sage scrub, rock outcrops in grassland | Low potential to occur in Diegan coastal sage scrub in BSA; not observed in multiple focused plant surveys |
| Variegated dudleya | *Dudleya variegata* | CNPS List 1B.2, MSCP Narrow Endemic, County Sensitive | Chaparral, sage scrub, woodland, grassland, vernal pools with clay soils | Detected (2009) |
| San Diego barrel cactus | *Ferocactus viridescens* | CNPS List 2.1, County Sensitive | Chaparral, coastal scrub, valley and foothill grasslands, and vernal pools | Detected (2009) |
| Palmer's grapplinghook | *Harpagonella palmeri* | CNPS List 4.2, County Sensitive | Clay soils in grassland, sage scrub, and chaparral | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| Graceful tarplant | *Holocarpha virgata ssp. elongata* | CNPS List 4.2, County Sensitive | Chaparral, cismontane woodlands, coastal sage scrub, and grasslands | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| Decumbent goldenbush | *Isocoma menziesii var. decumbens* | CNPS List 1B.2, County Sensitive | Chaparral, coastal sage scrub | Detected (2009) |

**Table 3.21-1 (cont.)**
**SPECIAL STATUS PLANT SPECIES POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status[1] | General Habitat Description | Rationale[2] |
|---|---|---|---|---|
| San Diego marsh-elder | *Iva hayesiana* | CNPS List 2.2, County Sensitive | Creeks or intermittent streambeds | Detected (2009) |
| Southwestern spiny rush | *Juncus acutus* ssp. *leopoldii* | CNPS List 4.2, County Sensitive | Coastal salt marshes at brackish locales, alkaline meadows, riparian marshes | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| California box-thorn | *Lycium californicum* | CNPS List 4.2, County Sensitive | Coastal scrub, coastal bluff scrub | Detected 750 ft west of the BSA (2009) |
| San Diego golden star | *Muilla clevelandii* | CNPS List 1B.1, County Sensitive | Clay soils in chaparral, coastal scrub, valley and foothill grassland, and in the vicinity of vernal pools | Detected just outside the BSA (2006). No access to survey nearby in the BSA in 2009 |
| Little mousetail | *Myosurus minimus* ssp. *apus* | CNPS List 3.1, County Sensitive | Grassland and vernal pools | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| Coulter's matilija poppy | *Romneya coulteri* | CNPS List 4.2, County Sensitive | Post-burn sage scrub or chaparral or along water courses | Low potential to occur in BSA; not observed in multiple focused plant surveys |
| Munz's sage | *Salvia munzii* | CNPS List 2.2, County Sensitive | Chaparral and sage scrub | Low potential to occur in BSA; not observed in multiple focused plant surveys; species was observed east of BSA (prior to 2006; URS 2005) |
| San Diego County viguiera | *Viguiera laciniata* | CNPS List 4.2, County Sensitive | Sage scrub | Detected (2009) |

[1] See Appendix F of the NES for status code information.
[2] For the year detected, the most current year of detection is provided.

## 3.21.3 Environmental Consequences

### Build Alternatives and Variations

The following analysis of potential impacts to special status plant species addresses all three identified build alternatives (Two Interchange, One Interchange, and No Interchange), with or without the associated variations.

Direct, permanent impacts to special status plant species would result from removal of the plants during construction and their replacement with paved roadways, cut and fill slopes, drainage features, retaining walls, and all POE/CVEF facilities. There would be no direct impacts to special status plant species during relocation of the natural gas pipeline in the northeastern portion of the POE/CVEF footprint (Figures 3.21-1a through 3.21-1d). The proposed easement for modifying and maintaining a portion of an existing drainage along the western boundary of the Siempre Viva Interchange to minimize the potential for scour and associated erosion following project implementation would impact 10 individuals of San Diego marsh-elder; this additional impact is included within the total impact to this species, as described below for each alternative.

As shown in Table 3.21-1, seven special status but non-listed plant species were observed in the BSA (Figures 3.21-1a through 3.21-1d): California adolphia, small-flowered morning glory, variegated dudleya, San Diego barrel cactus, decumbent goldenbush, San Diego marsh-elder, and San Diego County viguiera. Of these, five species would be directly impacted by the proposed project as discussed below. Two species (California adolphia and San Diego County viguiera) would not be impacted by any of the three build alternatives because they are outside of the R/W (Figure 3.21-1d) and are not discussed below.

The Siempre Viva Road Full Interchange Variation, if implemented, would increase the impacts of the Two Interchange Alternative with regard to small-flowered morning glory, San Diego barrel cactus and San Diego marsh-elder. None of the other potential project variations would result in changes to the identified impacts to special status plant species from any of the three build alternatives, because the additional impacts of these variations would all occur within developed areas or within approved/developed highway interchange R/W.

Small-Flowered Morning Glory

Small-flowered morning glory was observed in 31 patches (a multi-year total) throughout the grassland in the eastern portion of the BSA prior to 2006 and in 2009. Up to 20 patches of small-flowered morning glory would be directly impacted by each of the three build alternatives (Figures 3.21-1a through 3.21-1d). Two additional patches of this species would be impacted under the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative.

Variegated Dudleya

Variegated dudleya was observed in five locations (a multi-year total of 756 individuals) in the eastern portion of the BSA. Each of the three build alternatives would directly impact all individuals of variegated dudleya that are located within the BSA (Figure 3.21-1d).

San Diego Barrel Cactus

San Diego barrel cactus was observed in eight locations (a multi-year total of 19 individuals) in the eastern portion of the BSA. Observations made prior to 2009 appear to no longer exist or may not have been observed due to lack of access to survey. Each of the three build alternatives would directly impact 16 individuals of San Diego barrel cactus (Figure 3.21-1d). One additional individual of this species would be impacted under the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative.

Decumbent Goldenbush

Decumbent goldenbush was observed in 10 locations representing 177 individuals in the southeastern portion of the BSA. Each of the three build alternatives would directly impact 160 individuals of decumbent goldenbush (Figures 3.21-1c and 3.21-1d).

San Diego Marsh-Elder

San Diego marsh-elder was observed in 30 locations (a multi-year total of 65 individuals) in the eastern portion of the BSA. Each of the three build alternatives would directly impact up to 43 individuals of San Diego marsh-elder (Figures 3.21-1b and 3.21-1c), which includes impacts to 10 individuals within the easement for modifying and maintaining a portion of an existing drainage along the western boundary of the Siempre Viva Interchange to minimize the potential for scour and associated erosion following project implementation. An additional 11 individuals of this species would be impacted under the Siempre Viva Road Full Interchange Variation of the Two Interchange Alternative.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to sensitive plant species would result.

### 3.21.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

As described in Section 3.19.4, a Final PEIR/PEIS was published for the SR-11 and Otay Mesa East POE that identified the preferred location for the proposed project as the Western Alternative that would avoid some impacts that would have occurred if the proposed project were to be constructed within the Central or Eastern alternative areas. This section describes additional efforts that would be implemented to avoid or minimize impacts to special status plant species. Where impacts could not be avoided or minimized, this section describes the mitigation proposed to compensate for those impacts.

Small-Flowered Morning Glory

Avoidance and Minimization Efforts. For all three build alternatives, no avoidance or minimization efforts were determined feasible for small-flowered morning glory because it is found throughout non-native grassland that occupies the majority of the eastern portion of the necessary R/W. During construction of the proposed project, however, construction BMPs, installation of construction fencing, and monitoring construction limits would be conducted to avoid and/or minimize direct impacts to special status plant species outside the proposed project R/W.

Proposed Mitigation. Due to the lower sensitivity of this species, and because the impacts would not be adverse, mitigation for impacts to small-flowered morning glory are not proposed. However, the species would be preserved concurrently with preservation of non-native grassland on the western Lonestar parcel; the species is known to be present there as it was observed during a survey for the Quino checkerspot butterfly in 2009 (HELIX 2009c; see also Section 3.19.4).

Variegated Dudleya

Avoidance and Minimization Efforts. FHWA's selection of the Western Alternative in its Phase I ROD (FHWA 2008) eliminated many impacts to variegated dudleya that could have otherwise

occurred (see Section 3.19.4). For all three build alternatives, no further avoidance or minimization efforts were determined feasible for variegated dudleya because of its location within the necessary R/W. During construction of the proposed project, however, construction BMPs, installation of construction fencing, and monitoring construction limits would be conducted to avoid and/or minimize direct impacts to special status plant species outside the proposed project R/W.

Proposed Mitigation. Proposed mitigation for impacts to variegated dudleya is through salvage and translocation of at least 80 percent of the populations to be impacted (and their underlying soil if necessary). It is proposed that the populations be translocated to the Lonestar parcels (or equivalent mitigation parcel; see Section 3.19.4). A mitigation plan would be prepared that identifies the locations for translocation, responsible parties, methods of implementation, maintenance and monitoring requirements, final success criteria, and contingency measures. The reason for this mitigation proposal is that variegated dudleya is a County MSCP List A species for which 80 percent preservation is typically required. While Caltrans is not subject to the MSCP, Caltrans strives to be consistent with it.

San Diego Barrel Cactus

Avoidance and Minimization Efforts. FHWA's selection of the Western Alternative in its Phase I ROD (FHWA 2008) eliminated many impacts to San Diego barrel cactus that could have otherwise occurred (see Section 3.19.4). For all three build alternatives, no further avoidance or minimization efforts were determined feasible for San Diego barrel cactus because of its location within the necessary R/W. During construction of the proposed project, however, construction BMPs, installation of construction fencing, and monitoring construction limits would be conducted to avoid and/or minimize direct impacts to special status plant species outside the proposed project R/W.

Proposed Mitigation. Proposed mitigation for impacts to San Diego barrel cactus is through salvage and translocation of at least 80 percent of the individuals to be impacted (and their underlying soil if necessary). It is proposed that the individuals be translocated to the Lonestar parcel (or equivalent mitigation parcel; see Section 3.19.4). A mitigation plan would be prepared that identifies the locations for translocation, responsible parties, methods of implementation, maintenance and monitoring requirements, final success criteria, and contingency measures. The reason for this mitigation proposal is that San Diego barrel cactus is a County MSCP List B species for which 80 percent preservation is typically required. While Caltrans is not subject to the MSCP, Caltrans strives to be consistent with it.

Decumbent Goldenbush

Avoidance and Minimization Efforts. For all three build alternatives, no avoidance or minimization efforts were determined feasible for decumbent goldenbush because of its location within the necessary R/W. During construction of the proposed project, however, construction BMPs, installation of construction fencing, and monitoring construction limits would be conducted to avoid and/or minimize direct impacts to special status plant species outside the proposed project R/W.

Proposed Mitigation. Proposed mitigation for impacts to decumbent goldenbush is through the planting of seed or container stock of this species on the Lonestar parcels (or equivalent mitigation parcel; see Section 3.19.4) resulting in a minimum of 128 individual plants. A mitigation plan would be prepared that identifies the locations for mitigation, responsible parties, methods of implementation, maintenance and monitoring requirements, final success criteria, and contingency measures. The reason for this mitigation proposal is that decumbent goldenbush is a County MSCP

List A species for which 80 percent preservation is typically required. While Caltrans is not subject to the MSCP, Caltrans strives to be consistent with it.

San Diego Marsh-Elder

Avoidance and Minimization Efforts. For all three build alternatives, no avoidance or minimization efforts were determined feasible for San Diego marsh-elder because of its location within the necessary R/W and easement for the project. During construction of the proposed project, however, construction BMPs, installation of construction fencing, and monitoring construction limits would be conducted to avoid and/or minimize direct impacts to special status plant species outside the proposed project R/W.

Proposed Mitigation. Due to the low level of sensitivity of this species, mitigation measures for impacts to San Diego marsh-elder are not proposed.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

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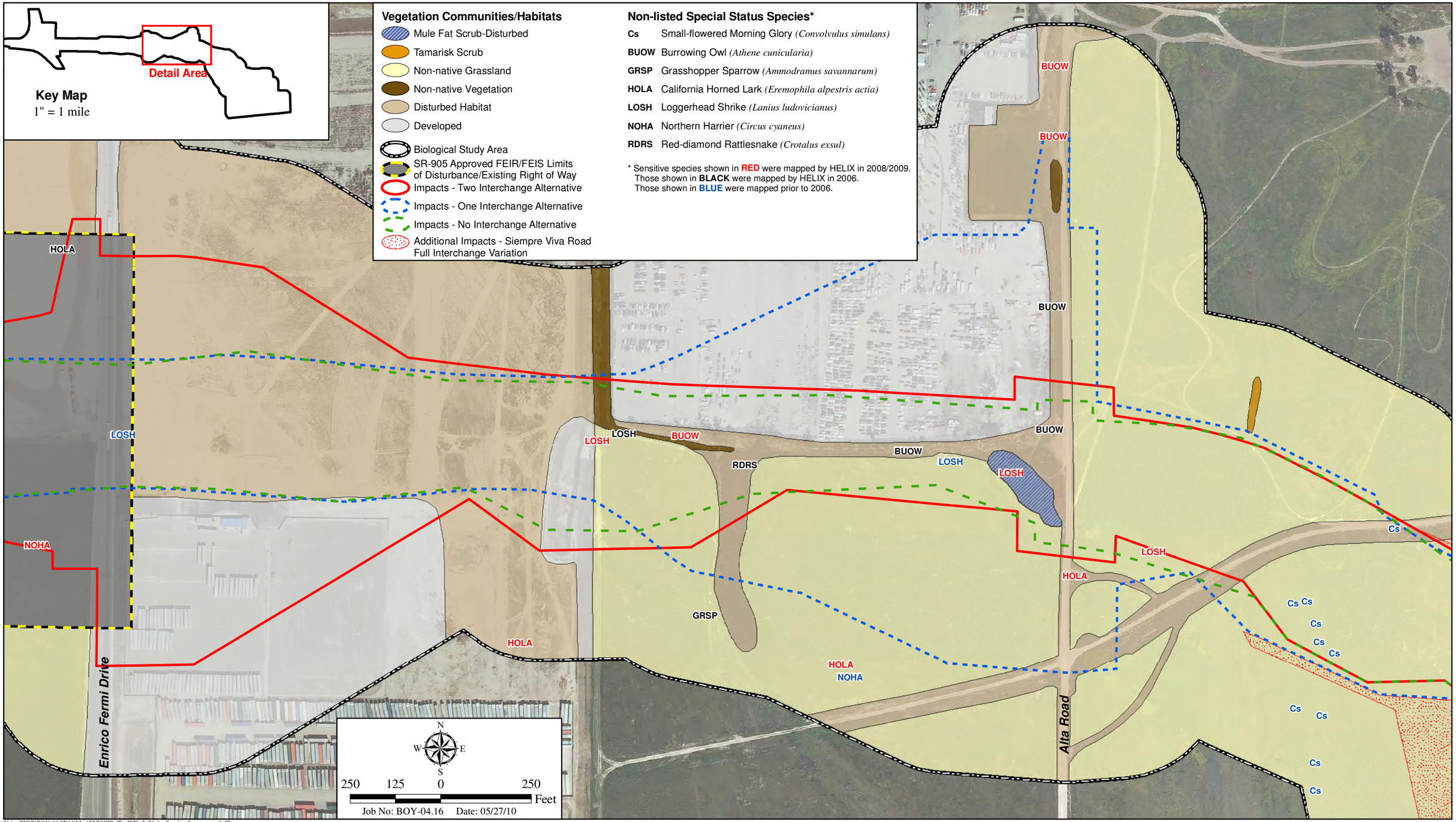


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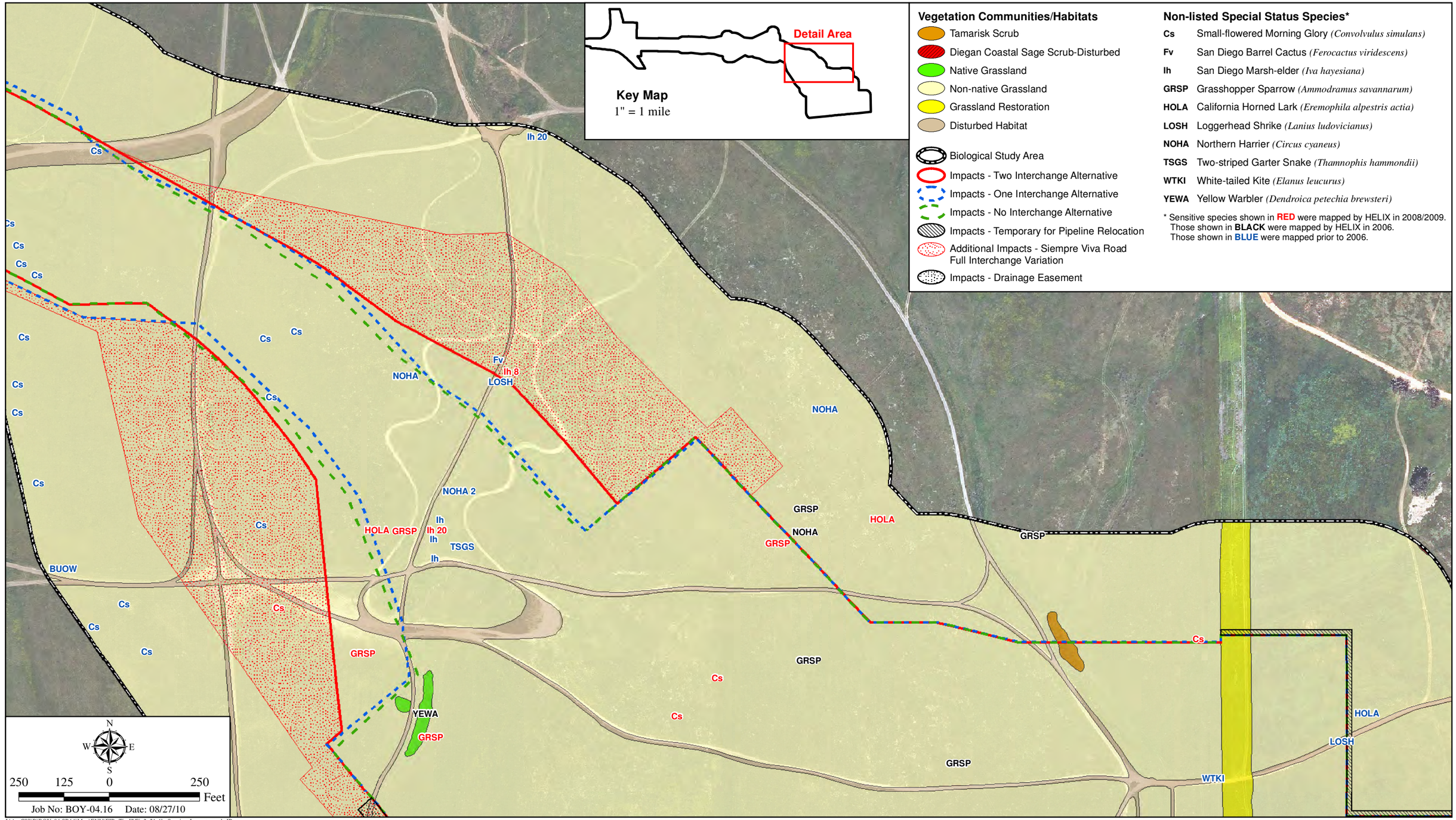
# Special Status Species/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

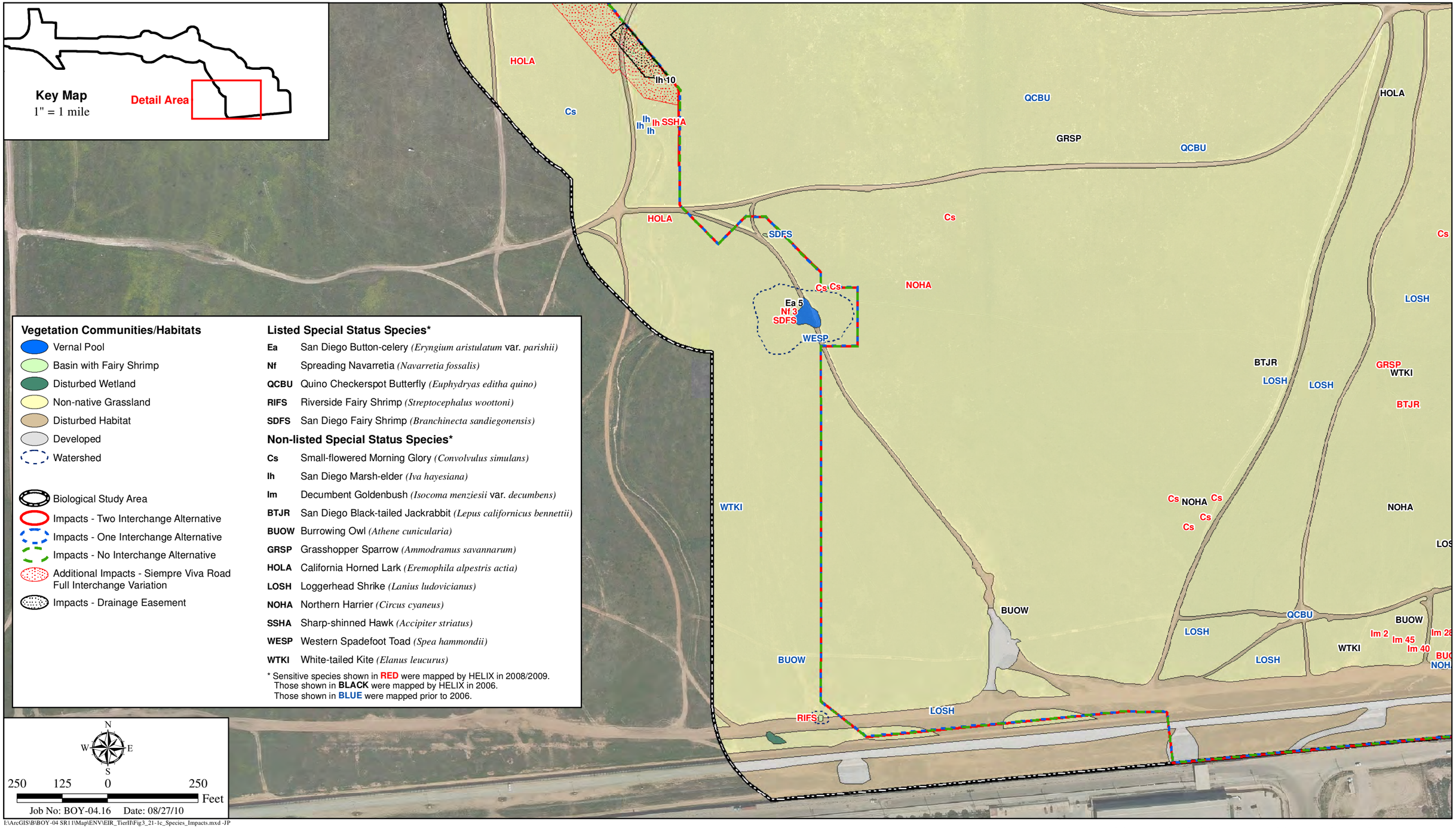
Figure 3.21-1a




# Special Status Species/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.21-1b

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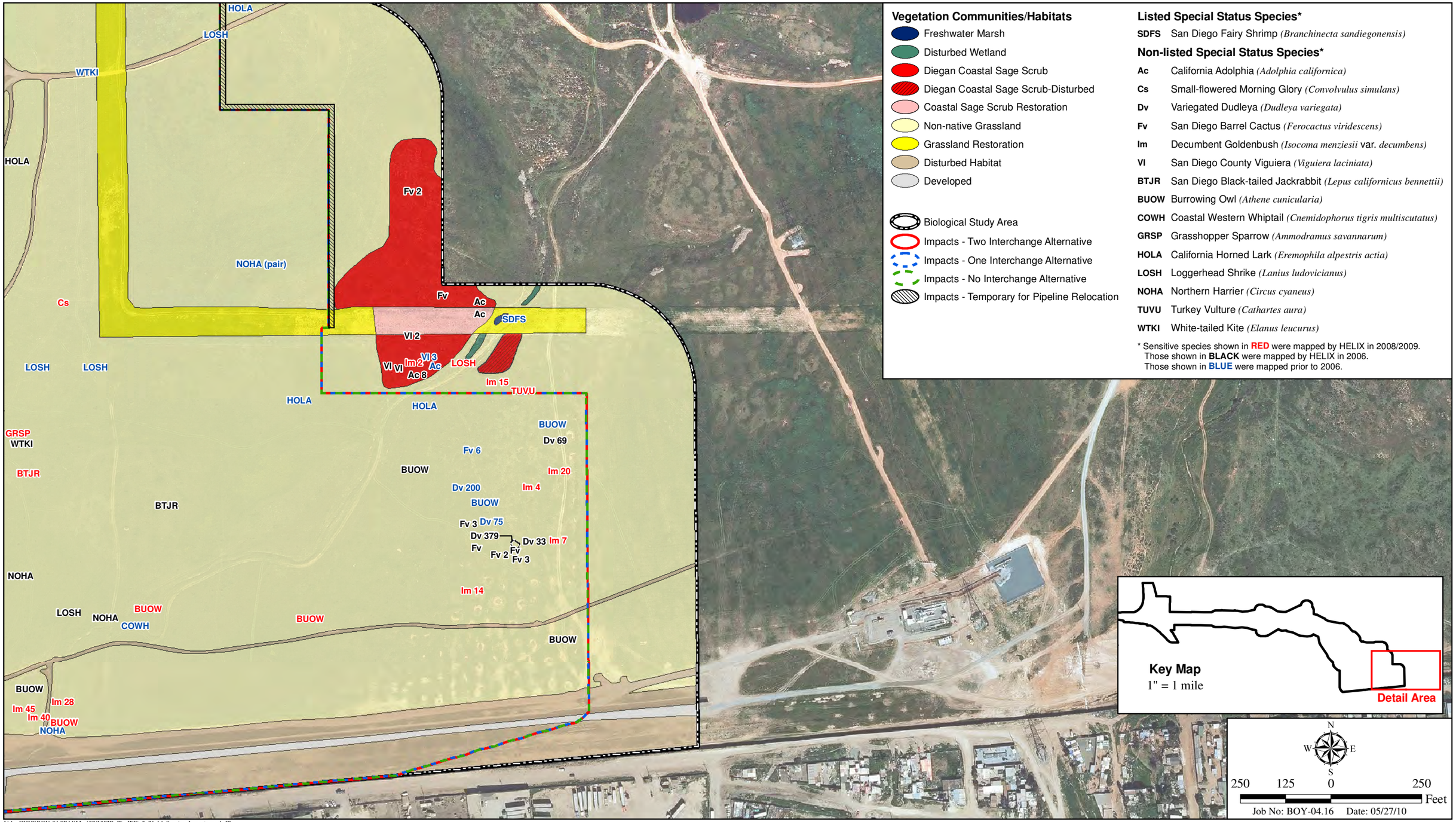
# Special Status Species/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.21-1c

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# Special Status Species/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.21-1d

## 3.22 ANIMAL SPECIES

This section addresses special status animal species that are not federally or state listed. Refer to Section 3.23 for a discussion of threatened and endangered animal species, as well as critical habitat.

### 3.22.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal ESAs. Species listed or proposed for listing as threatened or endangered are discussed in Section 3.23. All other special status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

In addition to state and federal laws regulating impacts to wildlife, there are local regulations that need to be considered when developing projects. Local regulations pertaining to wildlife include the following:

- County of San Diego MSCP Subarea Plan

While Caltrans strives to be consistent with the MSCP, it is not required to comply with the Subarea Plan, as discussed in Section 3.19.1.

### 3.22.2 Affected Environment

An NES was completed for the proposed project (HELIX 2010d) and lists (in its Appendix E) all animal species that were observed in the BSA. Section 2.2 and Appendix C of the NES also describe the focused surveys that were performed in the BSA for the burrowing owl (*Athene cunicularia*). All other focused animal surveys that were conducted were for listed species. A compilation of all special status animal species data collected during all surveys for the proposed project is included on Figures 3.21-1a through 3.21-1d. The compiled data was adjusted to eliminate multiple observations (from different years) of the same special status species from the same locations so as not to over-report their presence.

As described in Section 3.19.2, the BSA is dominated by non-native grassland. The animals most commonly observed in the BSA, therefore, are those usually found in a non-native grassland community, especially on Otay Mesa, and include, but are not limited to, western meadowlark (*Sturnella neglecta*), grasshopper sparrow (*Ammodramus savannarum*), burrowing owl, and Botta's pocket gopher (*Thomomys bottae*). Table 3.22-1 presents the non-listed but special status animal species potentially occurring or known to occur in the BSA. Fourteen of the 21 species, including the burrowing owl, were observed (Figures 3.21-1a through 3.21-1d).

**Table 3.22-1**
**SPECIAL STATUS ANIMAL SPECIES POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status | General Habitat Description | Rationale |
|---|---|---|---|---|
| Western spadefoot toad | *Spea hammondii* | SSC, County Sensitive | Coastal sage scrub, chaparral, and grassland habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas | Detected (prior to 2006) |
| Orange-throated whiptail | *Cnemidophorus hyperythrus beldingi* | SSC, County Sensitive | Coastal sage scrub, chaparral, edges of riparian woodlands, and washes; also found in weedy, disturbed areas adjacent to these habitats | High potential to occur in the eastern portion of the BSA |
| Coastal western whiptail | *Cnemidophorus tigris multiscutatus* | Special Animal, County Sensitive | Open coastal sage scrub, chaparral, and woodlands; frequently found along the edges of dirt roads traversing its habitats | Detected (prior to 2006) |
| Red-diamond rattlesnake | *Crotalus exsul* | SSC, County Sensitive | Found in chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey | Detected (2006) |
| Coast horned lizard | *Phrynosoma coronatum blainvillei* | SSC, County Sensitive | Coastal sage scrub and open areas in chaparral, oak woodlands, and coniferous forests with sufficient basking sites, adequate scrub cover, and areas of loose soil; requires native ants, especially harvester ants (*Pogonomyrmex* sp.) | Moderate potential to occur in sage scrub in the BSA |
| Two-striped garter snake | *Thamnophis hammondii* | SSC, County Sensitive | Closely associated with streams with rocky beds and bordered by willows; also, ponds, lakes, wetlands and vernal pools, mixed oak woodlands, and chaparral | Detected (prior to 2006) |

**Table 3.22-1 (cont.)**
**SPECIAL STATUS ANIMAL SPECIES POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status | General Habitat Description | Rationale |
|---|---|---|---|---|
| Sharp-shinned hawk | *Accipiter striatus* | Special Animal, County Sensitive | Forest interior and edges from sea level to near alpine areas; can also be found near rural, suburban and agricultural areas | Detected (2009) |
| Southern California rufous-crowned sparrow | *Aimophila ruficeps canescens* | SSC, County Sensitive | Coastal sage scrub and open chaparral as well as shrubby grasslands | Detected 1,000 feet north of the BSA (2006) |
| Grasshopper sparrow | *Ammodramus savannarum* | Special Animal, County Sensitive | Grassland | Detected (2009) |
| Bell's sage sparrow | *Amphispiza belli belli* | SSC, County Sensitive | Patchy distribution throughout the County, which often shifts to include partially recovered burned areas | Low potential to occur in the BSA |
| Golden eagle | *Aquila chrysaetos* | FP, SSC, MSCP Narrow Endemic, County Sensitive | Nesting occurs on cliff ledges or in trees on steep slopes, with foraging occurring primarily in grassland and sage scrub | High potential to forage in the BSA |
| Burrowing owl | *Athene cunicularia* | BCC, SSC, MSCP Narrow Endemic, County Sensitive | Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas; they may also use golf courses, cemeteries, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings, and irrigation ditches | Detected (2009) |
| Turkey vulture | *Cathartes aura* | County Sensitive | Foraging habitat includes most open habitats with breeding occurring in crevices among boulders | Detected (2009) |
| Northern harrier | *Circus cyaneus* | SSC, County Sensitive | Open grassland and marsh | Detected (2009) |
| Yellow warbler | *Dendroica petechia brewsteri* | SSC, County Sensitive | Mature riparian woodland | Detected as a migrant (2006) |
| White-tailed kite | *Elanus leucurus* | FP, County Sensitive | Riparian woodlands, oak or sycamore, or other tree groves adjacent to grassland | Detected (2006) |

**Table 3.22-1 (cont.)**
**SPECIAL STATUS ANIMAL SPECIES POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status | General Habitat Description | Rationale |
|---|---|---|---|---|
| California horned lark | *Eremophila alpestris actia* | SSC, County Sensitive | Coastal strand, arid grasslands, and sandy desert floors | Detected (2009) |
| Prairie falcon | *Falco mexicanus* | BCC, SSC, County Sensitive | Nesting occurs on inland cliff or bluff ledges or occasionally in old hawk or raven (*Corvus corax*) nests; foraging occurs in grassland or desert habitats | Low potential to forage in the BSA; no potential to nest there |
| Loggerhead shrike | *Lanius ludovicianus* | BCC, SSC, County Sensitive | Grassland, open sage scrub, chaparral, and desert scrub | Detected (2009) |
| San Diego black-tailed jackrabbit | *Lepus californicus bennettii* | SSC, County Sensitive | Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present | Detected in the BSA (2006) and north and west of the BSA (2009) |
| American badger | *Taxidea taxus* | SSC, County Sensitive | Open plains and prairies, farmland, and sometimes edges of woods | Low to moderate potential to occur in the BSA |

For the year detected, the most current year of detection is provided.
Status: BCC=Bird of (federal) Conservation Concern; SSC=State Species of Special Concern; Special Animal=taxa to be of the greatest conservation need to CDFG. "Special Animal" was used when the other status codes above (e.g., SSC) were not indicated on the CDFG's Special Animal List. See Appendix F of the NES for more status code information.

### 3.22.3 Environmental Consequences

#### Build Alternatives and Variations

The following analysis of potential impacts to special status animal species addresses all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or without the associated variations.

Direct, permanent impacts to special status animal species would result from removal of their habitats during construction and their replacement with paved roadways, cut and fill slopes, drainage features, retaining walls, and all POE/CVEF facilities. Temporary impacts to special status animal species would occur during relocation of the natural gas pipeline in the northeastern portion of the POE/CVEF footprint (Figures 3.21-1a through 3.21-1d).

While no focused surveys for special status, non-listed animal species were conducted, with the exception of the burrowing owl, 14 such species were observed in the BSA, including the burrowing owl, during other surveys conducted for the project. The remaining 13 special status species opportunistically observed include western spadefoot toad, coastal western whiptail, two-striped garter snake, red-diamond rattlesnake, northern harrier, white-tailed kite, sharp-shinned hawk, turkey vulture, loggerhead shrike, California horned lark, yellow warbler, grasshopper sparrow, and San Diego black-tailed jackrabbit (Figures 3.21-1a through 3.21-1d).

Because of the sensitivity of the burrowing owl, and this part of Otay Mesa supporting one of the last breeding populations of the species left in the County (Unitt 2004), focused surveys for the burrowing owl were conducted in the BSA six times from 2000 to 2009. Burrowing owls were observed during all of the surveys, and often during other focused species surveys (e.g., for the federally listed Quino checkerspot butterfly; *Euphydryas editha quino*).

Since all of the species observations were made at single points in time (with the exception of the burrowing owl), these animals are mobile, and the majority of the habitat (i.e., non-native grassland) in the eastern portion of the R/W is suitable for them (with the possible exception of the two-striped garter snake and the yellow warbler), each has potential to be impacted by all three build alternatives because of the extent of their habitat that would be lost. The two-striped garter snake is generally found around pools or other water sources that are limited in the BSA, so it is not likely that it would be affected. The yellow warbler was observed during migration; there is no yellow warbler breeding habitat (riparian woodland dominated by willows, cottonwood [*Populus fremontii*], etc.) in the BSA. The yellow warbler would not be impacted by the proposed project. The burrowing owl would be impacted by all three build alternatives as follows in the discussion below.

Burrowing Owl

The Two Interchange and No Interchange alternatives would directly impact 12 locations (a multi-year total) of burrowing owl (Figures 3.21-1a, 3.21-1c, and 3.21-1d). The One Interchange Alternative would directly impact 14 locations (a multi-year total) of burrowing owl (Figures 3.21-1a, 3.21-1c, and 3.21-1d). No additional locations would be impacted by any of the variations on the build alternatives. The USFWS expressed primary concern for the burrowing owl in 2008 in its NOI comment letter (See Chapter 5).

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to sensitive animal species would result.

### 3.22.4 Avoidance, Minimization and/or Mitigation Measures

The following describes avoidance, minimization and/or mitigation measures for non-listed but special status species impacts, including the burrowing owl.

**Build Alternatives and Variations**

All Non-listed Special Status Animal Species

Avoidance and Minimization Efforts. All brushing, grading, and clearing of vegetation would take place outside of the bird breeding season (February 1 through August 31) to avoid impacting nesting birds and violating the MBTA. If construction activities occur during the breeding season, a pre-construction survey would be conducted to ensure that no nesting birds are present within the proposed work area. Should a nest site be located, then appropriate measures may include (but are not limited to) monitoring during grading and construction to ensure no impacts to the nest site, designating the location as an environmentally sensitive area, and delaying or restricting project activities until nesting and fledging is complete.

Proposed Mitigation. Impacts to non-listed, special status animal species would be offset by the proposed compensatory mitigation for non-native grassland impacts (see Section 3.19.4). These species would also benefit from the proposed preservation of other habitats (e.g., Diegan coastal sage

scrub) as well as the restoration and enhancement of vernal pool habitat on the Lonestar Ridge West parcel (or equivalent mitigation parcel; see Section 3.19.4).

Burrowing Owl

Avoidance and Minimization Efforts. For burrowing owls, a pre-construction survey to identify active burrows within the R/W and 250 feet beyond the R/W (where potential burrows could be) would be conducted no more than 30 days prior to initiation of construction. To minimize impacts to nesting burrowing owls, no disturbance would occur within 250 feet of any active burrow (including to any that occur outside the R/W) during the burrowing owl breeding season (February 1 through August 31) or until a qualified biologist determines that a burrow is no longer active. For each active burrow to be directly impacted outside the burrowing owl breeding season, a qualified biologist would implement passive relocation measures (installation of one-way doors) in accordance with CDFG regulations (CDFG 1995). Once all owls have vacated the burrows (after approximately 48 hours), a qualified biologist would oversee the excavation and filling of the burrows.

Proposed Mitigation. Impacts to burrowing owls are proposed to be mitigated through preservation of up to 199.4 acres of non-native grassland (i.e., if the Two Interchange Alternative with the Siempre Viva Road Full Interchange Variation is selected; see Table 3.19-2). The preservation would occur on the Lonestar parcels (or equivalent mitigation parcels; see Section 3.19.4). It is acknowledged that the Lonestar parcels support approximately 173 acres of non-native grassland, and that additional grassland may be required. Caltrans will consult with the resource agencies to devise an acceptable strategy to compensate for any shortage in the required mitigation. To ensure suitable burrow opportunities are present, artificial burrows would be created in the preserved grassland at a 5:1 ratio for each burrow impacted (for a total of up to 70 artificial burrows). The artificial burrows would be constructed prior to the passive relocation. A Burrowing Owl Mitigation Plan that: (1) describes the off-site preservation of burrowing owl habitat; (2) identifies the methods for artificial burrow creation; and (3) outlines burrow and habitat maintenance requirements, burrow monitoring requirements, and reporting requirements would be prepared and submitted to CDFG for approval.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures would be required.

# 3.23 THREATENED AND ENDANGERED SPECIES

This section addresses threatened and endangered plant and animal species and critical habitat present in the BSA. Caltrans is required to determine if a proposed project would involve and possibly affect species that are formally listed or proposed to be listed under the FESA or CESA, or the critical habitat of such species.

## 3.23.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the FESA: 16 USC, Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the USFWS and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the CESA, California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

## 3.23.2 Affected Environment

The NES for the proposed project (HELIX 2010d) describes the results of focused surveys that were performed in the BSA for listed species. A compilation of all special status species data collected during all surveys for the proposed project is included on Figures 3.21-1a through 3.21-1d. The compiled data was adjusted to eliminate multiple observations (from different years) of the same special status species from the same locations so as not to over-report their presence.

The need for focused surveys for listed species was determined based on knowledge of species occurrences in the BSA from previous surveys and a habitat-based analysis and from an October 6 2006 mandatory species list letter from the USFWS (Appendix B in the NES). In October 2008, Caltrans sent a request for an updated species list, and the USFWS replied on November 7, 2008 that the October 6, 2006 letter should continue to be used for the proposed project.

The USFWS letter identified the following federally listed species as having potential to occur in the BSA: San Diego thornmint (*Acanthomintha ilicifolia*), Otay tarplant (*Deinandra conjugens*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), willowy monardella (*Monardella viminea*), and Otay mesa mint (*Pogogyne abramsii*); San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp (*Streptocephalus woottoni*), and Quino checkerspot butterfly; arroyo toad (*Bufo* [proposed

*Anaxyrus*] *californicus*); and coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*).

Table 3.23-1 presents the listed species and critical habitat potentially occurring or known to occur in the BSA. Focused surveys were conducted for all of the plant species, San Diego and Riverside fairy shrimp, Quino checkerspot butterfly, and coastal California gnatcatcher as described in Section 2.2 and Appendix C of the NES. Protocol survey reports were prepared and submitted to the USFWS following each of the surveys and are referenced in Section 2.2 and Chapter 6.0 of the NES. Although the least Bell's vireo, southwestern willow flycatcher, and arroyo toad were included in the USFWS letter, appropriate habitat for each of these species is not present in the BSA, so focused surveys for them were not conducted.

**Table 3.23-1**
**LISTED SPECIES AND CRITICAL HABITAT POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status | General Habitat Description | Habitat Present/ Absent | Rationale* |
|---|---|---|---|---|---|
| San Diego thornmint | *Acanthomintha ilicifolia* | FT, SE, CNPS List 1B.1, MSCP Narrow Endemic, County Sensitive | Chaparral, sage scrub, valley/foothill grassland, and in the vicinity of vernal pools on clay soil | HP | Potential habitat present |
| Otay tarplant | *Deinandra conjugens* | FT, SE, CNPS List 1B.1, MSCP Narrow Endemic, County Sensitive | Clay soils in grasslands or open sage scrub | HP | Detected more than 500 ft north of the BSA (prior to 2006) |
| San Diego button-celery | *Eryngium aristulatum* var. *parishii* | FE, SE, CNPS List 1B.1, County Sensitive | Vernal pools | HP, P | Detected (2006) |
| Willowy monardella | *Monardella viminea* | FE, SE, CNPS List 1B.1, MSCP Narrow Endemic, County Sensitive | Rocky washes in chaparral, sage scrub, and riparian communities; known from only three locations in San Diego County, all in the Miramar area | HP | Potential habitat present |
| Spreading navarretia | *Navarretia fossalis* | FT, CNPS List 1B.1, County Sensitive | Chenopod scrub, marshes, swamps, playas, vernal pools | HP, P | Detected (2009) |
| California orcutt grass | *Orcuttia californica* | FE, SE, CNPS List 1B.1, County Sensitive | Vernal pools | HP | Potential habitat present |
| Otay mesa mint | *Pogogyne nudiuscula* | FE, SE, CNPS List 1B.1, County Sensitive | Vernal pools | HP | Potential habitat present |

**Table 3.23-1 (cont.)**
**LISTED SPECIES AND CRITICAL HABITAT POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status | General Habitat Description | Habitat Present/ Absent | Rationale* |
|---|---|---|---|---|---|
| San Diego fairy shrimp | *Branchinecta sandiegonensis* | FE, MSCP Narrow Endemic, County Sensitive | Vernal pools or other water-holding basins | HP, P, CH | Detected in one basin and freshwater marsh in the BSA (prior to 2006) and in the vernal pool in the BSA (2009) |
| Riverside fairy shrimp | *Streptocephalus woottoni* | FE, MSCP Narrow Endemic, County Sensitive | Vernal pools or other water-holding basins | HP, P | Detected in one basin in the BSA (2009) |
| Quino checkerspot butterfly | *Euphydryas editha quino* | FE, MSCP Narrow Endemic, County Sensitive | Primary larval host plants in San Diego are dwarf plaintain at lower elevations, woolly plantain (*P. patagonica*) and white snapdragon (*Antirrhinum coulterianum*) at higher elevations; owl's clover is considered a secondary host plant if primary host plants have senesced; potential habitat includes vegetation communities with areas of low-growing and sparse vegetation; these habitats include open stands of sage scrub and chaparral, adjacent open meadows, old foot trails, and dirt roads | HP, P, CH | Detected (prior to 2006) |
| Arroyo toad | *Bufo* (proposed by the USFWS to be changed to *Anaxyrus*) *californicus* | FE, SSC, MSCP Narrow Endemic, County Sensitive | Restricted to riparian environments in the middle reaches of streams; known to breed, forage, and/or aestivate in aquatic, riparian, coastal sage scrub, oak, and chaparral habitats; thought to be restricted to the headwaters of large streams with persistent water from March to mid-June that have shallow, gravely pools and adjacent sandy terraces | A | No habitat present; no further work needed |

**Table 3.23-1 (cont.)**
**LISTED SPECIES AND CRITICAL HABITAT POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE BSA**

| Common Name | Scientific Name | Status | General Habitat Description | Habitat Present/ Absent | Rationale* |
|---|---|---|---|---|---|
| Southwestern willow flycatcher | *Empidonax traillii extimus* | FE, SE, MSCP Narrow Endemic, County Sensitive | Restricted to riparian woodlands along streams and rivers with mature, dense stands of willows, cottonwoods (*Populus* spp.) or smaller, spring fed or boggy areas with willows or alders (*Alnus* spp.) | A | No habitat present; no further work needed |
| Coastal California gnatcatcher | *Polioptila californica californica* | FT, SSC, County Sensitive | Coastal sage scrub | HP | Detected 1,125 ft north of the BSA (2006) |
| Least Bell's vireo | *Vireo bellii pusillus* | FE, SE, MSCP Narrow Endemic, County Sensitive | Riparian habitats that feature dense vegetative cover near the ground and a dense, stratified canopy; typically, it is associated with southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities | A | No habitat present; no further work needed |

For the year detected, the most current year of detection is provided.
Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - BSA is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present. Status: Federal Endangered (FE); Federal Threatened (FT); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Species of Special Concern (SSC); California Native Plant Society (CNPS). See Appendix F of the NES for more status code information.

## Federal Endangered Species Act Consultation Summary

Due to the involvement of a number of federal agencies on this proposed project (including [1] the FHWA through funding and review of the proposed project; [2] the USFWS due to the observation of listed species in the BSA; and [3] the USACE due to the occurrence of USACE jurisdiction in the BSA [see Section 3.20]), consultation with USFWS pursuant to Section 7 of the FESA would be necessary. The Section 7 consultation would be formal because the BSA contains federally listed species and critical habitat, and the proposed project would impact these resources (see Section 3.23.3). As discussed in Section 3.20, the USACE provided a comment letter dated October 23, 2009 on the purpose and need statement and project alternatives as part of the ongoing consultation process. Chapter 5.0 describes correspondence with the resource agencies during the consultation process to date. Caltrans anticipates the completion of a Biological Assessment in March 2011 and issuance of a Biological Opinion by November 2011.

**California Endangered Species Act Consultation Summary**

Diegan coastal sage scrub is a target community under the NCCP. While this community is present in the BSA, it would not be impacted by any of the three build alternatives, so consultation with the CDFG would not be required. One state listed species (San Diego button-celery) was observed in the BSA; however, it would not be impacted by any of the three build alternatives, so there would be no take authorization necessary under Section 2081 of the CESA. CDFG is a Participating Agency in this project environmental process and noted in their acceptance letter dated December 4, 2008 that they "will participate as needed to ensure that potential impacts to resources under our purview are avoided or reduced to the maximum extent possible."

**Plant Species**

Two listed plant species, San Diego button-celery and spreading navarretia, were observed in association with the vernal pool in the eastern portion of the BSA (Figure 3.21-1c). Five individuals of San Diego button-celery were observed in 2006, and three individuals of spreading navarretia were observed in 2009. No critical habitat for listed plant species occurs in the BSA.

San Diego button-celery is federally and state listed endangered and is a CNPS List 1B.1 species (rare, threatened, and endangered in California and elsewhere/seriously endangered in California). It occurs in association with vernal pools in Riverside and San Diego counties and Baja California, Mexico.

Spreading navarretia is federally listed threatened and is a CNPS List 1B.1 species (rare, threatened, and endangered in California and elsewhere/seriously endangered in California). It occurs in chenopod scrub, marshes, swamps, playas, and vernal pools in Los Angeles, Riverside, San Diego, and San Luis Obispo counties and Baja California, Mexico.

**Animal Species**

Three listed animal species were observed in the eastern portion of the BSA: San Diego fairy shrimp, Riverside fairy shrimp, and Quino checkerspot butterfly (Figures 3.21-1c and 3.21-1d). Critical habitat for the San Diego fairy shrimp and Quino checkerspot butterfly occurs in the eastern portion of the BSA (Figure 3.23-1, *Critical Habitats/Impacts*). No other listed species critical habitat occurs in the BSA.

San Diego fairy shrimp is federally listed endangered and occurs in vernal pools or other water-holding basins often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral in San Diego County and extreme northern Baja California, Mexico. San Diego fairy shrimp was detected in one basin and in freshwater marsh in the BSA prior to 2006 and in the vernal pool in the BSA in 2009 (Figures 3.21-1c and 3.21-1d).

Riverside fairy shrimp is federally listed endangered and typically occurs in vernal pools or other water-holding basins that are at least 30 centimeters deep (Simovich 1990). It is currently known from only five vernal pools in western Riverside County in the vicinity of Temecula and Rancho California (Eng et al. 1990); two locations in Orange County; 20 to 30 pools on Otay Mesa and at least one pool on Miramar in San Diego County; and one pool at an undisclosed location in northern Baja California, Mexico. Riverside fairy shrimp was detected in one basin in the BSA in 2009 (Figure 3.21-1c).

The Quino checkerspot butterfly is federally listed endangered, and potential habitat for the species includes vegetation communities with areas of low-growing and sparse vegetation with appropriate host and nectar plants (see Table 3.23-1 for more information). Populations of the Quino checkerspot butterflies are known to exist only as several, probably isolated, colonies in southwestern Riverside County, southern San Diego County, and northern Baja California, Mexico. The San Diego populations are mainly limited to areas of Otay Mountain, Brown Field, sections of Otay Mesa, Jamul, Marron

Valley, and Jacumba. The Quino checkerspot butterfly was detected in three locations in the BSA prior to 2006 (Figure 3.21-1c). It was not found during focused surveys in 2006 and 2009.

### 3.23.3 Environmental Consequences

**Build Alternatives and Design Variations**

The following analysis of potential impacts to listed species addresses all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or without the associated design variations.

Direct, permanent impacts to Quino checkerspot butterfly would result from replacement of their locations and potential habitats with paved roadways, cut and fill slopes, drainage features, retaining walls, and all POE/CVEF facilities (Figures 3.21-1a through 3.21-1d).

San Diego Button-Celery and Spreading Navarretia

San Diego button-celery and spreading navarretia were observed in the vernal pool in the BSA (Figure 3.21-1c).

The proposed western edge of the POE was shifted to the east to avoid impacts to the vernal pool that supports San Diego button-celery and spreading navarretia. Therefore, construction and implementation of any of the build alternatives would not impact San Diego button celery or spreading navarretia.

San Diego Fairy Shrimp

San Diego fairy shrimp was detected in one basin and in freshwater marsh in the BSA prior to 2006 and in the vernal pool in the BSA in 2009 (Figures 3.21-1c and 3.21-1d). No impacts would occur to the basin and vernal pool (or their watersheds) or freshwater marsh that support San Diego fairy shrimp, because these species' locations occur outside the R/W (Figures 3.21-1c and 3.21-1d), and the project would not affect the watersheds for these three locations.

Critical habitat for the San Diego fairy shrimp occurs across the eastern portion of the BSA, although actual habitat that currently supports the San Diego fairy shrimp is a fraction of this area. No avoidance or minimization efforts were determined feasible for San Diego fairy shrimp critical habitat, because of its location within the necessary R/W. Each of the three build alternatives would impact 111.5 acres of San Diego fairy shrimp critical habitat (Figure 3.23-1). The USFWS determined in its final rule for San Diego fairy shrimp critical habitat designation (72 FR 70647 70714, December 12, 2007) that the San Diego fairy shrimp's primary constituent elements are: (1) vernal pools with shallow to moderate depths (2 inches to 12 inches) that hold water for sufficient lengths of time (7 to 60 days) necessary for incubation, maturation, and reproduction of the San Diego fairy shrimp, in all but the driest years; (2) topographic features characterized by mounds and swales and depressions within a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools described in PCE 1, providing for dispersal and promoting hydroperiods of adequate length in the pools (i.e., the vernal pool watershed); and (3) Flat to gently sloping topography, and any soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat (including Carlsbad, Chesterton, Diablo, Huerhuero, Linne, Olivenhain, Placentia, Redding, and Stockpen soils). The San Diego fairy shrimp critical habitat impact area for the proposed project currently supports approximately 102 acres of non-native grassland, 3 acres of grassland restoration, 0.1 acre of tamarisk scrub, 6 acres of disturbed habitat, and 0.3 acre of developed land. No basins with fairy shrimp or vernal pools have been identified within this impact area, Although the area does contain the identified PCE soils, as much as 45 percent of the impact area is too steep to support vernal pools.

Riverside Fairy Shrimp

Riverside fairy shrimp was detected in one basin in the BSA in 2009 (Figure 3.21-1c). The basin within which this species occurs (and the basin's watershed) occur completely outside the R/W, so it is not discussed further.

Quino Checkerspot Butterfly

The Quino checkerspot butterfly was detected in three locations in the BSA prior to 2006 (Figure 3.21-1c). All three of these locations would be directly impacted by each of the three build alternatives (Figure 3.21-1c). Additionally, each of the three build alternatives would directly impact 4.2 acres of Quino checkerspot butterfly critical habitat (Figure 3.23-1).

Noise Impacts to Sensitive Species

In 1991, the USFWS recommended that noise levels not exceed 60 dBA to protect the coastal California gnatcatcher and other special status bird species. The only noise-sensitive listed species in the area is the coastal California gnatcatcher, but the nearest identified gnatcatchers are located over 1,000 feet from the BSA. Project-related noise generated by construction or operational activities would be attenuated over this distance to below a level of significance. Potential gnatcatcher habitat (coastal sage scrub) is present, adjacent to the eastern edge of the proposed POE, but no gnatcatchers have been observed there during multiple biological surveys conducted between 2001 and 2009. Therefore, no noise impacts to special status bird species would result from project implementation.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts to threatened and endangered species would result.

### 3.23.4 Avoidance, Minimization and/or Mitigation Measures

As described in Section 3.19.4, a Final PEIR/PEIS was published for the SR-11 and Otay Mesa East POE that identified the preferred location for the proposed project as the Western Alternative that would avoid some impacts that would have occurred if the proposed project were to be constructed within the Central or Eastern alternative areas. This section describes additional efforts that would be implemented to avoid or minimize impacts to threatened and endangered species. Where impacts could not be avoided or minimized, this section describes the mitigation proposed to compensate for those impacts.

During construction of the proposed project, construction BMPs, installation of construction fencing, and monitoring construction limits would be conducted to avoid and/or minimize direct impacts to threatened and endangered species outside the proposed project impacts and R/W.

**Build Alternatives and Variations**

San Diego Fairy Shrimp

Avoidance and Minimization Efforts. The proposed western edge of the POE was shifted to the east to avoid direct impacts to the vernal pool (and its watershed) that supports San Diego fairy shrimp.

No avoidance or minimization efforts were determined feasible for impacts to critical habitat for the San Diego fairy shrimp because of its location within the necessary R/W, so mitigation is proposed for this impact as described below.

Proposed Mitigation. Proposed compensatory mitigation for direct impacts to 111.5 acres of San Diego fairy shrimp critical habitat (Figure 3.23-1) is through preservation of San Diego fairy shrimp critical habitat on the western Lonestar parcel (or equivalent mitigation parcel; see Section 3.19.4 and Figure 3.23-1). The western Lonestar parcel contains approximately 150 acres of San Diego fairy shrimp critical habitat. The mitigation proposed would permanently preserve San Diego fairy shrimp critical habitat that otherwise could be developed, and this critical habitat contains substantially more San Diego fairy shrimp and San Diego fairy shrimp habitat with higher functionality and more constituent elements than the critical habitat impacted. The final mitigation for critical habitat impacts would be negotiated during the Section 7 consultation with the USFWS. Caltrans anticipates the completion of a Biological Assessment in March 2011 and issuance of a Biological Opinion by November 2011.

Quino Checkerspot Butterfly

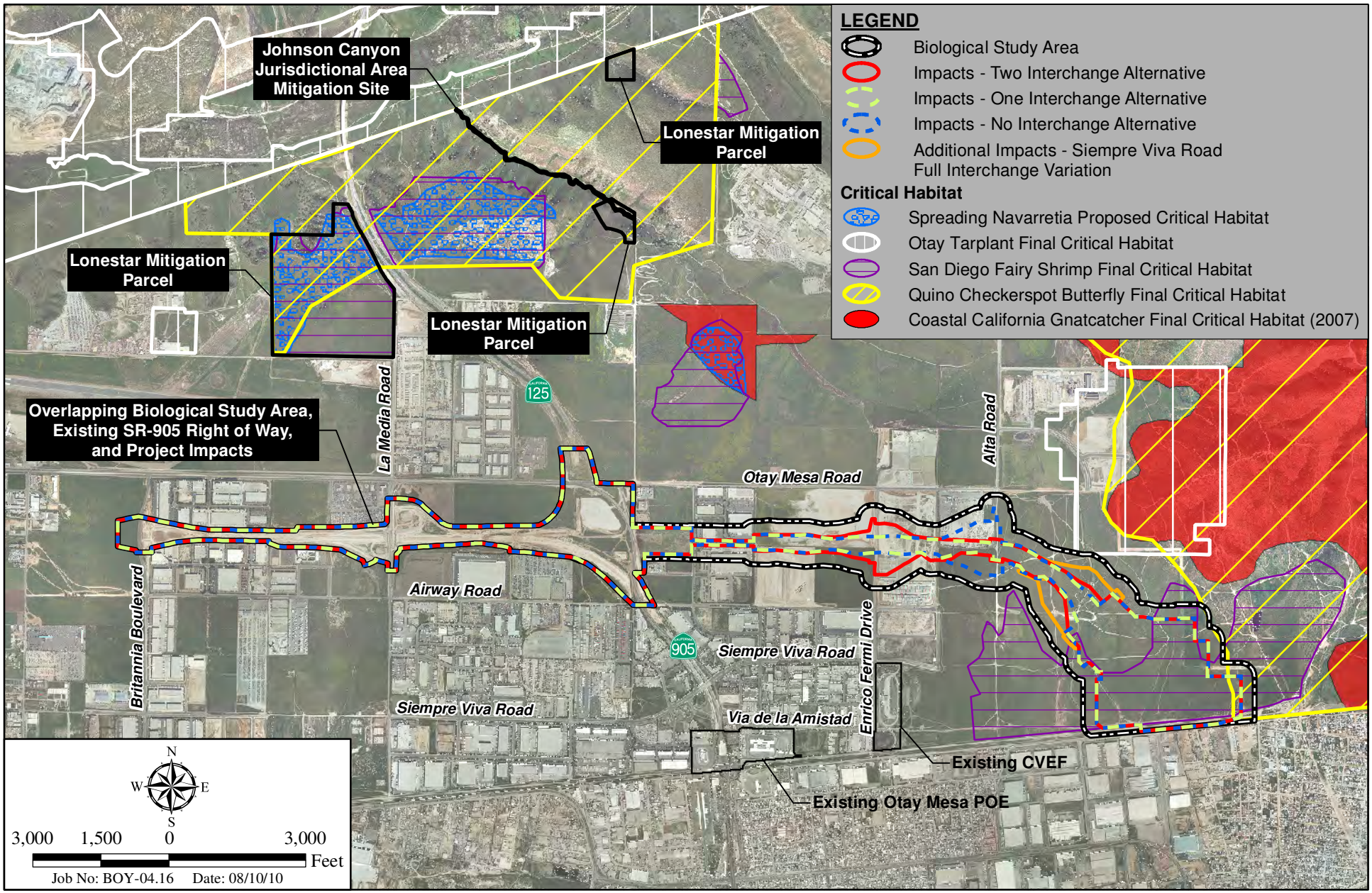
Avoidance and Minimization Efforts. FHWA's selection of the Western Alternative in its Phase I ROD (FHWA 2008) eliminated most impacts to Quino checkerspot butterfly critical habitat, as well as impacts to its potential Diegan coastal sage scrub habitat that otherwise could have occurred (see Section 3.19.4). For all three build alternatives, no further avoidance or minimization efforts were determined feasible for the Quino checkerspot butterfly because of its locations (i.e., observations prior to 2006 but none in 2006 or 2009) and the location of its critical habitat within the necessary R/W.

Proposed Mitigation. Because of the low quality of the Quino checkerspot butterfly habitat to be impacted, the small number of individual Quino checkerspot butterfly observed, and because no Quino checkerspot butterflies have been observed in recent years, the focus of the mitigation proposed is on preservation and restoration of Quino checkerspot butterfly habitat off site. Therefore, proposed mitigation for the loss of Quino checkerspot butterfly would be through preservation and enhancement of historically occupied Quino checkerspot butterfly habitat on the Lonestar parcels (or equivalent mitigation parcels; see Section 3.19.4).

Proposed mitigation for the direct project impact to 4.2 acres of Quino checkerspot butterfly critical habitat (Figure 3.23-1) would be through preservation of Quino checkerspot butterfly critical habitat on the Lonestar parcels (or equivalent mitigation parcels; see Section 3.19.4 and Figure 3.23-1). Potential habitat for the Quino, as well as dwarf plantain and owl's clover (host plants), are present on the Lonestar parcels. The final mitigation for critical habitat impacts would be negotiated during the Section 7 consultation with the USFWS. Caltrans anticipates the completion of a Biological Assessment in March 2011 and issuance of a Biological Opinion by November 2011.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures are required.

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# Critical Habitat/Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.23-1

# 3.24 INVASIVE SPECIES

This section addresses invasive species, which are not considered sensitive by any regulating agency but that can cause economic or environmental harm, or harm to human health.

## 3.24.1 Regulatory Setting

On February 3, 1999, President Clinton signed EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

## 3.24.2 Affected Environment

### Plant Species

Even more inclusive than the state's noxious weed list (USDA NRCS 2009), the California Invasive Plant Inventory (California Invasive Plant Council 2006) categorizes invasive plant species as high, moderate or limited, reflecting the level of each species' negative ecological impacts in California. Other factors, such as economic impact or difficulty of management, are not included in the assessment.

The most invasive plant species are categorized as "high" and have severe ecological impacts on physical processes, plant and animal communities and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment, and many have a wide ecological distribution.

Species categorized as "moderate" have substantial and apparent, but generally not severe, ecological impacts on physical processes, plant and animal communities and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, although establishment is generally dependent on ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Plants categorized as "limited" are invasive, but their ecological impacts are minor on a statewide level, or there was not enough information to justify a higher category. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

An NES was completed for the proposed project that (in its Appendix D) identifies the invasive, non-native plant species that were observed in the BSA and that are included in the California Invasive Plant Inventory Database for the southwest California floristic province (California Invasive Plant Council 2006). There are 37 species from the database present in the BSA as presented in Table 3.24-1. Species that are also on the state's noxious weed list are also identified in Table 3.24-1.

**Table 3.24-1**
**INVASIVE OR NOXIOUS PLANT SPECIES FOUND IN THE BSA**

| Scientific Name | Common Name | Habitat(s)[1] | California Invasive Plant Inventory Negative Ecological Impact Category[2] | | | USDA NRCS Noxious Weed |
|---|---|---|---|---|---|---|
| | | | High | Moderate | Limited | |
| *Atriplex semibaccata* | Australian saltbush | NNG | | X | | |
| *Brassica nigra* | black mustard | DH, NNG | | X | | |
| *Brassica rapa* | field mustard | NNG | | | X | |
| *Brassica* sp | mustard | MFS-D | | Unknown[3] | | |
| *Bromus diandrus* | common ripgut grass | DCSS, DCSS-D, NNG, DH | | X | | |
| *Bromus hordeaceus* | soft chess | NNG | | | X | |
| *Bromus madritensis* ssp. *rubens* | foxtail chess | DCSS, DCSS-D, NNG, DH | X | | | |
| *Carduus pycnocephalus* | Italian thistle | NNG | | X | | X |
| *Carpobrotus edulis* | hottentot-fig | | X | | | |
| *Centaurea solstitialis* | yellow star-thistle | | X | | | X |
| *Chrysanthemum coronarium* | garland daisy | | | X | | |
| *Convovulus arvensis* | | | | | | |
| *Cotula coronopifolia* | African brass-buttons | NNG, FWM | | | X | |
| *Cynara cardunculus* | cardoon | NNG | | X | | X |
| *Erodium cicutarium* | red-stem filaree | DH, NNG | | | X | |
| *Foeniculum vulgare* | fennel | DH, DW, NNG | X | | | |
| *Hirschfeldia incana* | perennial mustard | NNG | | X | | |
| *Hordeum marinum* ssp. *gussoneanum* | Mediterranean barley | DH, NNG | | X | | |
| *Hypochaeris glabra* | smooth cat's-ear | NNG | | | X | |
| *Lepidium latifolium* | peppergrass | NNG | X | | | X |
| *Lolium multiflorum* | Italian ryegrass | NNG | | X | | |
| *Lythrum hyssopifolium* | grass poly | | | | X | |
| *Marrubium vulgare* | horehound | NNG | | | X | |
| *Medicago polymorpha* | bur-clover | NNG | | | X | |
| *Mesembryanthemum crystallinum* | crystalline iceplant | | | X | | |
| *Nicotiana glauca* | tree tobacco | | | X | | |
| *Oxalis pes-caprae* | Bermuda-buttercup | NNG | | X | | |
| *Phalaris* sp. | canary grass | DW | | Unknown | | |
| *Polypogon monspeliensis* | rabbitsfoot grass | DW, DH, NNG, FWM | | | X | |
| *Raphanus sativus* | wild radish | NNG | | | X | |

**Table 3.24-1 (cont.)**
**INVASIVE OR NOXIOUS PLANT SPECIES FOUND IN THE BSA**

| Scientific Name | Common Name | Habitat(s)[1] | California Invasive Plant Inventory Negative Ecological Impact Category[2] | | | USDA NRCS Noxious Weed |
|---|---|---|---|---|---|---|
| | | | High | Moderate | Limited | |
| *Rumex crispus* | curly dock | DW, TS, FWM | | | X | |
| *Salsola tragus* | Russian thistle | DH, NNG, VP | | | X | X |
| *Schismus barbatus* | Mediterranean grass | DH, NNG | | | X | |
| *Silybum marianum* | milk thistle | NNG | | | X | |
| *Sisymbrium irio* | London rocket | | | X | | |
| *Tamarix ramosissima* | French tamarisk | | X | | | |
| *Tamarix* sp. | tamarisk | DW, TS, MFS-D | Unknown | | | |
| *Vulpia myuros* | fescue | DCSS, DCSS-D, DH, NNG | | X | | |

[1] Habitat acronyms, where recorded: DCSS=Diegan coastal sage scrub, DCSS-D=Diegan coastal sage scrub-disturbed, DH=disturbed habitat, DW=disturbed wetland, FWM=freshwater marsh, MFS-D-mule fat scrub-disturbed, NNG=non-native grassland, TS=tamarisk shrub, VP=vernal pool.

[2] From the California Invasive Plant Inventory Database (California Invasive Plant Council 2006).

[3] "Unknown" is used when the species was not identified, but at least one species of the genus is in the California Invasive Plant Inventory Database.

Many of the species listed in Table 3.24-1 are present because they invaded following previous site disturbances (possibly grazing, farming, and/or fire). Non-native grassland is the dominant vegetation community in the BSA (approximately 69 percent coverage). Therefore, the greatest cover of invasive plant species present in the BSA is associated with this community. Some of these species include red brome, ripgut grass, Italian ryegrass, and mustard. Additionally, Russian thistle is common in disturbed habitat, which is the second most prevalent vegetation community in the BSA. In wet areas like freshwater marsh, invasive species include such plants as curly dock. Additionally, there are patches of tamarisk scrub in the BSA that are dominated by tamarisk, another invasive species listed in the California Invasive Plant Inventory Database.

**Animal Species**

Two potentially invasive animal species were observed in the BSA: cabbage white butterfly (*Pieris rapae*) and European starling (*Sturnus vulgaris*). Unlike the California Invasive Plant Inventory and the state's noxious weed list, there is no known inventory for categorizing invasive animal species.

The cabbage white butterfly was observed in non-native grassland in the BSA, and its host and nectar plants include mustard and wild radish (*Raphanus sativus*), both of which are invasive plant species present in the BSA. The locations of European starlings within the BSA were not recorded, but the species is likely to occur within developed land, disturbed habitat, and/or non-native grassland, where it could forage on the ground for its main prey of insects.

### 3.24.3 Environmental Consequences

**Build Alternatives and Variations**

The following analysis of potential impacts due to invasive species addresses all three identified build alternatives (Two Interchange, One Interchange, and No interchange), with or without the associated variations.

Caltrans does not currently use any of the species on the state's noxious weed list for erosion control or landscaping. Therefore, invasive species would not be used in any landscaping needed for the project.

While it is assumed that all invasive plant species present in the R/W would be removed during grading, there is potential for construction activities to result in the spread of invasive plant species from the R/W to new areas with natural communities of concern outside the R/W. If the proposed project caused invasive plant species to colonize new areas, particularly Diegan coastal sage scrub (a natural community of concern), this could impact the federally listed endangered Quino checkerspot butterfly by displacing its larval host plants and adult nectar resources and could also displace special status plant species by shading and/or out-competing the native species.

Construction of the proposed project could also result in a localized decrease in the cabbage white butterfly population, a species that is considered a pest on crops such as cabbage, broccoli, and radishes, and in large numbers may be considered invasive primarily due to its potential for economic harm. However, its presence (or absence) would not have a substantial effect on biological resources in the proposed project area.

Construction of the proposed project would not be expected to increase or decrease the population of European starlings, an introduced species that is considered invasive because it competes for nest cavities with native birds. The proposed project could eliminate some foraging habitat for European starlings, resulting in a potential population decrease, but at the same time this species is highly adaptable and can

thrive around human settlement. Therefore, the European starling is not expected to have substantial effect on biological resources in the proposed project area; it would be expected to occur primarily in developed areas.

In summary, the proposed project could impact adjacent natural communities of concern, if construction resulted in the spread of existing invasive plant species outside the R/W. No substantial impacts would be associated with invasive animal species.

**No Build Alternative**

Under the No Build Alternative, the described development actions for the three build alternatives and variations would not occur, and no associated impacts from invasive species would result.

### 3.24.4 Avoidance, Minimization and/or Mitigation Measures

**Build Alternatives and Variations**

Invasive Plant Species

Avoidance and Minimization Efforts. In compliance with EO 13112 on invasive species and subsequent guidance from the FHWA, the landscaping and erosion control included for the proposed project would not use species on the state's noxious weed list (USDA NRCS 2009) or species listed as invasive in the California Invasive Plant Inventory Database (California Invasive Plant Council 2006).

Inspection of construction areas would be made by a biological monitor for invasive species according to a prescribed schedule during construction. A typical schedule would involve weekly inspections after the first rains, and throughout the rainy season of the construction period. Outside the rainy season, inspection for invasive species would occur monthly.

Soils that may contain invasive plant species seeds would not be stockpiled where wind or water could transport the material/seeds to natural communities of concern. Soils that may contain invasive plant species seeds also would not be transported in such a manner that the seeds could spread natural communities of concern.

Proposed Mitigation. If during the inspections invasive species that could spread into new areas are found, precautions would be required that could include the cleaning of construction equipment to help prevent the spread of invasive plant species material and eradication strategies recommended by the biological monitor.

Upon completion of grading, all areas of temporary disturbance would be revegetated with native species or ornamental landscaping to limit colonization by invasive species. A qualified biologist would review the landscape concept plans to ensure that no invasive species (as listed on the state's noxious weed list or in the California Invasive Plant Inventory Database) are included.

**No Build Alternative**

No impacts were identified for the No Build Alternative. In addition, no project action would occur under the No Build Alternative; therefore, no associated avoidance, minimization or mitigation measures are required.

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# ADDITIONAL IMPACTS

## 3.25 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

This section discusses in general terms the relationship of the proposed project's local short-term impacts and use of resources to the maintenance and enhancement of long-term productivity. NEPA requires such a discussion in 40 CFR Section 1502.16 (Environmental Consequences) of the CEQ Regulations, although CEQA Guidelines Section 15127 (Limitations on Discussion of Environmental Impact) notes that the "statutory requirement for a discussion of the relationship between short-term uses and long-term productivity was repealed by Chapter 1230 of the Statutes of 1994." A discussion in conformance with the guidance in the Caltrans SER is provided below.

### 3.25.1 Build Alternatives and Variations

The project alternatives would have similar impacts, as the Two Interchange Alternative, One Interchange Alternative and No Interchange Alternative and design variations would share similar footprints occupying a single corridor and would involve large-scale construction applying similar techniques. The short-term and long-term losses and benefits listed below are likely to occur.

Short-term losses would include:

- Economic losses experienced by businesses affected by construction and/or property takes
- Construction impacts such as noise, motorized and non-motorized traffic delays or detours
- Brief interruptions in utility service where relocation or connections would be required
- Indirect construction-related impacts upon adjacent sensitive habitat

Short-term benefits would include:

- Increased jobs and revenue generated during construction

Long-term losses would include:

- Permanent loss of plant and wildlife resources
- Loss of foraging areas or opportunities for wildlife
- Loss of open space
- Loss of critical habitat
- Visual impacts
- Worsening of congestion on certain local streets and highways in the study area
- Noise increases
- Use of construction materials and energy

Long-term benefits would include:

- Improvement of the transportation network of the region and the project vicinity
- Increased access to the border, improving the free movement of people and goods
- Reduction of congestion on certain local streets and highways
- Reduction in wait times to cross the border
- Improvement in security and the ability to conduct primary inspections at all POEs
- Increased jobs and revenue through creation of a new POE and CVEF
- Support of anticipated long-term development within the EOMSP

Transportation improvements are based on state/local comprehensive planning, which considers the need for present and future traffic requirements within the context of various factors, including present and future land use development. As discussed in Chapter 1.0, important factors affecting the need for the proposed project include wait times and congestion related to commercial goods movement and cross-border travel. The economic analysis documented in the Community Impact Assessment concluded that by the project horizon year of 2035, the total annual economic output generated by the reduced border wait time for commercial border crossings as a result of any of the build alternatives would range from a low estimate of $297 million and 1,575 jobs for the San Diego regional economy to a high of $1.63 billion and 8,807 jobs. On a national level, economic output and employment generated would be approximately three times these figures. Therefore, the local impacts and use of resources by the proposed project are generally consistent with the maintenance and enhancement of long-term productivity for the local area, region, state, and nation.

### 3.25.2 No Build Alternative

The No Build Alternative would offer none of the benefits nor have any of the losses listed above. It would, however, not support planned development nor resolve worsening congestion on local streets and highways and other POEs.

# 3.26 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED PROJECT

## Project Build Alternatives and Variations

Implementation of any of the build alternatives and variations for the proposed project would involve a similar commitment of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facilities is considered an irreversible commitment during the time period that the land would be used for the highway facility, POE and CVEF. However, if a greater need arises for use of the land or if the facilities are no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and construction materials such as cement, aggregate, and bituminous material would be expended. Additionally, large amounts of labor and natural resources would be used in the making of construction materials. Construction would also require a substantial one-time expenditure of state and federal funds, which are not retrievable but would be partially offset by savings in energy and time. In addition to the costs of construction, there would be costs for maintenance and personnel. Although such resources are generally not retrievable, their commitment is based on the concept that residents in the immediate area, region and state would benefit from the improved quality of the transportation and POE system. These benefits would consist of improved accessibility and safety, savings in time and fuel and the provision of a dependable transportation system which are expected to outweigh the commitment of these resources. With the exception of the No Toll Variation, all of the project build scenarios include a toll for use of the facility which would serve to further offset the initial expenditure of funds.

## No Build Alternative

The No Build Alternative would not require irreversible and irretrievable commitments of resources.

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# 3.27 CUMULATIVE IMPACTS

## 3.27.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the land use study area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

## 3.27.2 Transboundary Issues

### Federal Guidance

The CEQ Guidance on NEPA Analysis for Transboundary Impacts (July 1, 1997) states: "… in the context of international agreements, the parties may set forth a specific process for obtaining information from the affected country which could then be relied upon in most circumstances to satisfy agencies' responsibility to undertake a reasonable search for information." In this case, since Mexico is undertaking a corresponding POE project on the south side of the border, Mexican agencies are addressing potential environmental impacts of concern to Mexico. The responsible agencies from Mexico and the U.S. also jointly participate in the on-going Border Liaison Mechanism, which meets regularly to discuss transboundary issues and exchange information associated with the two projects. The Border Liaison Mechanism participants include FHWA, Mexico's SCT and IMPlan, SANDAG, Caltrans, the Mexican and American Consulates, GSA, and CBP. In 1998, an informal agreement was signed between the local agencies of San Diego, Tijuana, and the States of California and Baja California. This agreement (referred to as a "Letter of Intent"), entitled "Binational Corridor Preservation for State Route 11 – Tijuana/Rosarito 2000 and Site Designation for the East Otay Mesa - Mesa de Otay II Port of Entry" was signed by SANDAG, City of San Diego, County of San Diego, City of Tijuana, City of Rosarito, State of Baja California, and Caltrans.

President Carter's EO 12114 Section 2.5 provides exemptions that include Presidential actions. Historically, the Department of State has taken the position that transboundary impacts are generally not considered (unless they are outside the exemption created by EO 12114). While the POE itself can be considered a Presidential action (i.e., it has been granted a conditional Presidential Permit), the overall program is in the nature of a joint venture and, therefore, some analysis of transboundary issues is necessary. Therefore, existing and planned development in Mexico is not included in the following cumulative analysis. However, development in Mexico, potential impacts being considered and the

commitment of Mexican authorities to addressing transboundary impacts to the extent feasible through their own process are discussed briefly below.

**Cumulative Development in Mexico**

Industrial and residential development in the Tijuana/Tecate region has grown rapidly in recent years, with more development planned in the near future. Statistics for 2006 indicate a total of 568 "maquiladora" or "twin-plant" facilities in Tijuana, with another 119 such facilities in Tecate and 130 in nearby Mexicali. Industrial parks number 51 in Tijuana, 24 in Mexicali, and a total of 11 in Ensenada, Tecate and Playas de Rosarito. Extensive growth of this industrial base is planned, including expansion of operations by LG Electronics, Sharp Electronics, Samsung Electronics, Hyundai Translead, MotorCar Parts, Continental Laboratory Products, Samjin LND, Goodrich Aerostructures, and others. The largest planned residential/industrial project in the area is Valle de Palmas, located between Tijuana and Tecate. The first phase of the project, nearing completion, is a 1,050-acre development including 10,000 dwelling units, 494 acres of industrial development expected to generate up to 13,000 jobs, and accompanying infrastructure (SCT 2007).

In the area immediately adjacent to the proposed Otay II POE in Tijuana, the 2005 residential population was estimated at 35,000 people. Much of this residential development consists of dense, uncontrolled settlements encroaching into steep canyons and creek and river beds, with inadequate water and wastewater infrastructure (SCT 2007).

IMPlan, a Mexican environmental agency, has addressed potential environmental impacts related to the proposed Otay II POE, related roadway infrastructure, and other development in the area in its document "*Programa Parcial de Mejoramiento de la Mesa De Otay Este, En La Ciudad De Tijuana, B.C.*" (August 2005) as summarized below.

The document emphasizes that, because urbanization's pattern, density and process are irreversible, it is of utmost importance that risk and vulnerability mitigation criteria are adopted. According to this planning document, growth of future urban spaces should respect areas of ecological value, particularly creek and river beds at canyons and higher areas located to the east of the zone reserved for the Otay II POE. Areas adjacent to creek beds and protected green areas should be used for recreation purposes without causing environmental deterioration. Sustainable activities should be promoted, and the activities should be compatible with the essential conservation function of sensitive areas, balancing urban development with the environment. Unregulated residential encroachment, mainly along creek beds and other federal areas, should be avoided. Water degradation in creeks, unregulated solid waste disposal, and air pollution would be avoided by the strict enforcement of control regulations and laws in force. Other actions include establishing programs that would promote the restoration and conservation of areas defined as having ecological value, identifying innovative funding sources, and designing and implementing programs that would create a culture of pollution reduction and environmental protection. The clear vision is to avoid settlements in areas not suitable for urban development, and to encourage planting of compatible vegetation along the riverside and at higher areas where vegetative cover is needed to minimize mud slide risk (IMPlan 2005).

Although no infrastructure or design features to minimize air quality emissions from trucks and vehicles waiting to cross through the POE are discussed in the portion of the document obtained to date, discussions with Mexican officials confirm that a 30-minute wait time is an appropriate goal for both Otay Mesa ports. This is consistent with GSA's Border Wizard assumptions for port feasibility analysis.

## 3.27.3 Cumulative Analysis

### Resources to Consider

The environmental analyses in the preceding sections in Chapter 3.0 document the source and degree of impact for each resource area addressed, per NEPA and CEQA guidance, in this project-level document.

The cumulative impact analysis focuses on: (1) those resources substantially impacted by the proposed project or (2) resources currently in poor or declining health or at risk even if the project impacts are relatively small. Resources substantially impacted by the proposed project include transportation/traffic (section 3.8), visual/aesthetics (Section 3.9), natural communities (Section 3.19), wetlands and other waters (Section 3.20), plant species (Section 3.21), animal species (Section 3.22), and threatened and endangered species (Section 3.23).

Cumulative traffic impacts are addressed in Section 3.8, rather than in this section; the traffic impact analysis addresses cumulative traffic impacts in the 2035 horizon year.

Other resources, which would not be substantially impacted by the proposed project or are not in poor or declining health, are not evaluated in detail in this section. These resources include land use (Section 3.1), consistency with plans and programs (Section 3.2), growth (Section 3.3), community character and cohesion (Section 3.4), relocations and real property acquisition (Section 3.5), environmental justice (Section 3.6), utilities and emergency services (Section 3.7), cultural resources (Section 3.10), hydrology and floodplain (Section 3.11), water quality and storm water (Section 3.12), geology and soils (Section 3.13), paleontology (Section 3.14), air quality (Section 3.16), noise (Section 3.17), energy (Section 3.18), and invasive species (Section 3.24).

### Resource Study Areas and Health

Figure 3.27-1, *Cumulative Resource Study Areas*, depicts the resource study area (RSA) defined for each issue in the cumulative analysis. The RSA boundaries were selected to be large enough for defining resource health and historical context, but focused on the project's area of influence for a particular resource.

Resource area health refers broadly to the overall condition, stability or vitality of a resource. Recent trends, such as government and planning decisions, demographic changes and catastrophic natural events, can affect resource area health, which may be classified as improving, stable or in decline. Based on information developed as part of this environmental document, including technical reports and analysis conducted by environmental practitioners, as well as the EOMSP EIR (1993) and the OMCP (1993), it was determined that the following resources currently are in declining health: visual/aesthetics; natural communities; wetlands and other waters; plant species; animal species; and threatened or endangered species.

For the issues in this cumulative analysis that are currently in declining health, the historical context has been influenced mainly by steady urbanization of the surrounding area, leaving the eastern portion of Otay Mesa as one of the last large, developable areas in the San Diego region. Plans for eventual urban development of this area have been documented in the EOMSP and OMCP since 1993. Multiple land and transportation development projects have been proposed in the undeveloped portions of the EOMSP and OMCP areas in the past five years, consistent with land use planning for the area. SR-125 was built during this period, and SR-905 is currently under construction.

The EOMSP calls for protection of environmentally sensitive lands, including sensitive species. However, the 1993 EIR for the EOMSP noted there is no feasible way to lessen or avoid the significant impacts to biological resources in the area, because some known biologically sensitive areas have been targeted for

industrial or commercial uses. Similarly, the fact that many currently undeveloped parcels are slated for development was recognized to have inevitable consequences for the visual environment in the area.

**Proposed Project Impacts**

For the issues carried forward into this cumulative analysis, the impacts of the three build alternatives would be substantially the same. The SR-905/SR-125/SR-11 Interchange variations (especially the SR-905/SR-125/SR-11 Full Interchange Variation), as well as the Siempre Viva Road Full Interchange Variation and the 46-foot Median Variation, would add to the impacts of the build alternatives. Because it is the alternative represented in the EOMSP, the Two Interchange Alternative was selected to represent the impacts of the other build alternatives, combined with a worst case assumption of implementation of the SR-905/SR-125/SR-11 Full Interchange, Siempre Viva Road Full Interchange and 46-foot Median Variations. This combined alternative design scenario is addressed in the cumulative impacts analysis which follows.

Direct and indirect impacts from the proposed project for each issue carried forward into the cumulative analysis are summarized below.

- Hazardous waste/materials: Impacts requiring mitigation for agriculturally-related contaminants and the potential for other hazardous materials
- Visual/Aesthetics: Change to the general visual environment throughout the land use study area by introducing a highway, POE and CVEF with associated structures where currently very little development exists
- Natural Communities: Impacts requiring mitigation to natural communities, including native, non-native, and restored grassland communities
- Wetlands and Other Waters: Impacts requiring mitigation to wetlands and other waters, including disturbed mule fat scrub and streambed
- Plant Species: Impacts requiring mitigation to non-listed plant species, including variegated dudleya, San Diego barrel cactus, and decumbent goldenbush
- Animal Species: Impacts requiring mitigation to 12 non-listed animal species, including impacts to burrowing owl
- Threatened and Endangered Species: Impacts requiring mitigation to the listed animal species, Quino checkerspot butterfly, and critical habitat for San Diego fairy shrimp and Quino checkerspot butterfly

Impacts from the proposed project to other resources would either not occur with project implementation, or would be avoided by measures incorporated into the project design and construction.

**Other Current and Reasonably Foreseeable Future Actions or Projects**

Reasonably foreseeable future projects are those that are likely to occur in the future and will add to the cumulative impact on a particular resource. Generally, projects will be considered "reasonably foreseeable" if they:

a. Have applications pending with a government agency
b. Are included in an agency's budget or capital improvement program
c. Are foreseeable future phases of existing projects

Current and reasonably foreseeable projects in the RSAs are identified and described in Table 3.1-1 in Section 3.1, and are depicted in Figure 3.27-2. Table 3.27-1 and Table 3.27-2, describe the anticipated environmental impacts from these projects, as best can be determined based on available information. Much of this compilation was based on data made available by the County and City that identified the location and status of proposed discretionary projects being processed by the County and City.

**Table 3.27-1**
**ANTICIPATED CUMULATIVE PUBLIC WORKS PROJECTS AND IMPACTS**

| Map # | Project | Proposed Improvements and Project Status | Environmental Summary |
|---|---|---|---|
| | | ***Caltrans Capital Improvement Projects*** | |
| A | SR-905 | Project consists of construction of a six-lane freeway from I-805 to the existing Otay Mesa POE at the U.S. - Mexico Border, including grade-separated local access interchanges, and a freeway-to-freeway interchange with future SR-125. Final Environmental Impact Statement/Report dated July 2004. R/W has been acquired in the eastern portion of SR-905. Siempre Viva Road interchange and associated segment of SR-905 have been constructed. Remaining portion of SR-905 between Siempre Viva Road and Britannia Boulevard is currently under construction. Completion is expected by late 2010. and the western portion of SR-905 is expected to be completed in 2012. Clearing and preliminary grading within the SR-905/SR-125/SR-11 interchange area began in 2009 | Substantial impacts and mitigation identified for water quality, cultural resources, hazardous materials, hydrology/drainage, floodplain, noise, socioeconomics, paleontological resources, and biological environment issues (natural communities, wetlands, WUS, sensitive plants, sensitive animals, wildlife movement corridors, invasive species, and edge effects). These issues mitigated to be less than substantial. Direct and cumulative unmitigable impacts to vernal pools. |
| B | I-805 Managed Lanes South | The project proposes to construct four buffer-separated Managed Lanes between East Palomar Street and SR-94, and two HOV/transit lanes between SR-94 and Landis Street, all in the freeway median. Includes associated ramps and transit stations and park-and-ride lots. An EIR/EA is currently being prepared. | Potential impacts identified for traffic and transportation, aesthetics, cultural resources, paleontological resources, hazardous waste/materials, air quality, noise, natural communities, wetlands, and plant and animal species (including threatened and endangered). |
| | | ***GSA/CBP Capital Improvement Projects*** | |
| C | U.S. Cargo Import Facility Improvements at Otay Mesa POE | Project consists of adding lanes to a connector roadway, modifying approaches and fences for booths and other infrastructure improvements to enhance goods movement at the U.S. Cargo Import Facility, just east of the existing Otay Mesa POE at the U.S. - Mexico Border. First phase of project completed; final phase is pending. | Site and surroundings are largely developed. Known biological constraints to expansion/redevelopment of the site are limited to the drainage/wetlands area between the international border and the commercial truck inspection inbound queuing road. |
| D | Otay Mesa POE Modernization Project | Modernization of existing POE facility. The proposed project would reconfigure the existing POE through the purchase of adjacent property. The project would add primary and secondary inspection booths to the passenger side. On the commercial side, the project would add primary inspection, empty-truck inspection, and exit booths, and would relocate the hazardous materials import inspection area from the export compound to the commercial import compound. | NA |
| E | Reconfiguration and Expansion of the San Ysidro POE | Three-phase project includes demolition and new construction of most of the POE. New facility will consist of 210,000 square feet of building space, primary and secondary inspection areas, 29 northbound vehicle lanes, two northbound bus lanes, six southbound vehicle lanes, and a new southbound roadway to connect with Mexico's El Chaparral facility.<br><br>EIR/EIS complete. Upcoming schedule includes Phase I construction in 2010 and completion of final phase construction in 2014. | Site and surroundings are largely developed.<br>Potential environmental issues include, but are not limited to, traffic, community impacts, utilities, historical resources, paleontology, hazardous materials, noise, air quality, energy, biological resources. |
| | | ***County Capital Improvement Projects*** | |
| F | Lonestar Road | Project is the construction of a new road. No planning group has been assigned and funding has yet to be determined. Estimated completion date is Spring 2011. | NA |
| G | Otay Mesa Road Widening | Project is the widening of 1.2 miles of Otay Mesa Road from SR-905 to Enrico Fermi Drive. No planning group has been assigned and funding has yet to be determined. Estimated completion date is Winter 2010-2011. | NA |
| | | ***Otay Water District Capital Improvement Projects*** | |
| H | Otay Mesa Recycled Water Supply System Capital Improvement Program R2087, R2077, R2058 Project | Construction of three recycled water pipelines to bring recycled water to Otay Mesa: A 24-inch diameter pipeline in Wueste Road (R2087), a 24-inch pipeline in Alta Road (R2077), and a 16-inch diameter pipeline in Airway Road/La Media Road (R2058 Part of a recycled water program to be constructed between 2009 and 2016.<br><br>A pressure-reducing station is planned as part of the Wueste Road Pipeline to reduce pressure of recycled water arriving in Otay Mesa. | NOP filed 10/7/09. Draft EIR issued February 26, 2010. Potential impacts to biological resources, cultural resources, and associated with geology/soils and noise. |

**Table 3.27-1 (cont.)**
**ANTICIPATED CUMULATIVE PUBLIC WORKS PROJECTS AND IMPACTS**

| Map # | Project | Proposed Improvements and Project Status | Environmental Summary |
|---|---|---|---|
| | | ***City of San Diego Capital Improvements Project*** | |
| I | Otay Mesa Road Widening | Improve Otay Mesa Road to a four-lane Prime Arterial from Piper Ranch Road easterly to SR-125 and a 4-lane Major Road from SR-125 to Sanyo Avenue. | NA |
| J | Otay Truck Route Phase IV | Widen existing truck route between La Media Road and Drucker Lane 12 feet to the north to accommodate an 11-foot safety lane and two 12-foot truck lanes. The additional width will require five feet additional R/W to the north. Construction began in July 2010. | NA |
| | | ***San Diego Rural Fire Protection District*** | |
| K | Fire Station | As determined necessary on the basis of development in the region, a permanent 6,000-square foot Sheriff's station would be co-located with a future 8,000-square foot fire station at the southeast corner of the intersection of Otay Mesa Road and Enrico Fermi Drive. | NA |
| | | ***SANDAG*** | |
| L | South Bay Bus Rapid Transit (BRT) – Phase One | The South Bay BRT is being developed to provide high-speed transit connections between downtown San Diego and the Otay Mesa Border Crossing along the future I-805 Managed Lanes and a dedicated transit way through eastern Chula Vista. At full buildout, project will include 15 stations with upgraded passenger shelters and technological enhancements, and premium coach buses. Options are being explored to connect the proposed Otay Mesa East POE to the BRT system. Preliminary engineering, environmental work and final design in process; Phase One is planned to be in operation by late 2012. | NA |

CIP = Capital Improvement Plan; NOP = Notice of Preparation; EIR = Environmental Impact Report; FEIR = Final Environmental Impact Report; ND = Negative Declaration; MND = Mitigated Negative Declaration; IS = Initial Study; NOD = Notice of Determination; PES = Preliminary Environmental Study; SEIR = Supplemental EIR; EOMSP = East Otay Mesa Specific Plan; TM = Tentative Map; SPM = Tentative Parcel Map; SWMP = Storm Water Management Plan; NA = Not Available; WUS = Waters of the U.S.; NNG = Non-Native Grassland; DCSS = Diegan Coastal Sage Scrub; QCB = Quino Checkerspot Butterfly; BUOW = Burrowing Owl; BMO = Biological Mitigation Ordinance; HCP = Habitat Conservation Plan; ADT = Average Daily Traffic.

**Table 3.27-2**
**ANTICIPATED CUMULATIVE LAND DEVELOPMENT PROJECTS AND IMPACTS**

| Map # | Identifying Project Number/ Project Name | Location | Proposed Improvements and Project Status | Environmental Summary |
|---|---|---|---|---|
| **County of San Diego** | | | | |
| 1 | TM 5405/SPA 04-006<br>MUP 00-024/<br>Otay Crossings Commerce Park | South of Otay Mesa Road and east of Alta Road | Subdivision into 62 industrial lots ranging from 1.3 to 69.6 net acres each (total lot area: 287 acres). Also, 26.6 acres of public streets. Open space easements on five lots in the northeast corners of site to protect steep slopes and biologically sensitive resources. Two-phase development. Future R/W for SR-11 and new POE tentatively mapped on four lots, covering approximately 102.7 acres. 311.6 acres.<br><br>February 9, 2006 County scoping letter required preparation of a supplemental EIR due to changes since the EOMSP EIR (July 27, 1994). Draft Supplemental EIR circulated for public review May 27, 2010. | Significant and unmitigable impacts identified for traffic and air quality. Significant and mitigable impacts identified for biological resources (2.0 acres Diegan coastal sage scrub; 263.1 acres NNG; 0.1 acre native grassland; 0.056 acre vernal pools; 0.21 acres Corps jurisdictional non-wetland WUS; 0.99 acre CDFG jurisdictional area; 72 San Diego barrel cacti; 138 marsh-elder; 5 San Diego button-celery; 31 road pools; territory of 4 burrowing owl pairs; two QCB locations; habitat of the coastal western whiptail, California horned lark, loggerhead shrike, grasshopper sparrow, and northern harrier; and potential noise impacts to sensitive species), cultural resources, paleontological resources, public services and utilities, traffic, and noise. |
| 2 | TM 5538/TM 5139/MUP 98-020<br>STP 02-05139-1/<br>SPA 07-003<br>Sunroad Centrum Tech Center | Northeast of Otay Mesa Road and Otay Mesa Road/SR-905 | Subdivision into 63 lots ranging in size from 1.4 acres to 5.1 acres, of which 11.5 acres dedicated for commercial uses (SPA). 289.5 acres<br><br>Final Supplemental EIR to the EOMSP Final EIR dated December 15, 2000 for 96-lot project (TM 5139). EIR addendum dated March 4, 2003 for 56-lot project included changes to road improvements and grading. TM 5139 expired; TM 5538 currently proposed on same site (plus triangular area just west of original site, adjacent to SR-125 | Supplemental EIR for TM 5139 identified significant unmitigable impacts for air quality and transportation; significant and mitigable impacts identified for biological and cultural resources. Mitigation required open space to protect vernal pools, NNG and sensitive species, cultural and bio monitors, off-site purchase of 0.4 acre of southern willow scrub wetland, 5.4 acres native grassland, 48.6 acres of NNG, avoidance of raptor nesting, and obtaining a QCB take permit. Other requirements include traffic improvements and construction conditions to prevent air quality impacts; however, cumulative air quality impacts and short-term construction traffic impacts would remain unmitigable. |
| 3 | TM 5304/Saeed TM/Airway Business Center | North side of Airway Dr. between Paseo de las Americas and Michael Faraday Dr. | Subdivision into 18 lots (0.75 acre to 3.07 acres) for light industrial uses. 40.59 acres<br><br>Project approved April 21, 2008. Upon completion of an addendum to the EOMSP EIR, project may proceed. | Scoping letter dated April 8, 2003 indicated potentially significant impacts to biology, paleontology, archaeology, geology, traffic, and drainage issues. April 2, 2004 biological survey identified impacts to 38.52 acres of NNG, to be mitigated by purchase of 19.26 acres of mitigation bank habitat. Only sensitive species are foraging raptors. |
| 4 | TM 5394/<br>Dillard and Judd Roll County LLC/Enrico Fermi Industrial Park/South County Commerce Center | Southwest corner of Enrico Fermi Drive and Otay Mesa Road/SR-905 | Subdivision into 16 industrial lots ranging from 2.25 to 8.20 acres each. 80 total acres<br><br>FEIR dated January 2006, certified March 10, 2006. Minor Amendment to the MSCP, consistent with BMO, within the boundary of the adopted HCP. Impacts concluded as less than significant. Project completed September 9, 2008. | Impacts to biological resources concluded as less than significant. |
| 5 | MUP 04-004<br>RP 04-001/<br>Otay Hills Construction Aggregate Extraction Operation | Approximately 0.5 mile east of the intersection of Otay Mesa Road and Alta Road | Rock Quarry located on 210 acres in 550 acre-ownership. Construction aggregate extraction operation, including materials processing (primary and secondary plants), concrete batch plant, cement-treated base plant, asphalt batch plant, and recycling of asphalt and concrete products. 210 acres<br><br>Draft EIR submitted April 2007. First Iteration Review of the Screencheck Draft EIR dated September 6, 2007. March 3, 2009 Follow-up letter from February 13, 2009 meeting stated that current negotiations were underway to revise the project footprint. | NOP dated May 26, 2005 included Initial Study identifying potential impacts to land use, geology, hydrology/water quality, biological (including WUS) and cultural resources, traffic, noise, air quality, public services/utilities, hazardous materials, and aesthetics. |
| 6 | TPM 20701RPL1/<br>ZAP 99-029/STP 05-018<br>SPA 05-005/<br>Burke Minor Subdivision/Otay Logistics Center | Eastern side of Enrico Fermi Drive between Siempre Viva Road and Airway Road | Subdivision into four parcels of 8.80, 9.37, 9.48, and 11.66 acres. Grading and improvement of a commercial road traversing the site. Truck parking and storage on site. Construction of approximately 270,00 square feet of buildings and warehouse in the northern part of the site, along with 404 parking spaces and 73 loading spaces. MND for Burke Minor Subdivision dated October 2, 2003. 39.3 acres | MND for Burke Minor Subdivision dated October 2, 2003 (otherwise relies on EOMSP EIR), plus an addendum dated February 23, 2001 to mitigate impacts. Significant and mitigable impacts identified for biological resources. Mitigation consists of offsite purchase of 20 acres of NNG to mitigate for 40 acres (entire site) of disturbed grassland at 0.5:1 ratio. Otay Logistics Center: ND dated August 2006 required fair share traffic contributions to mitigate traffic impacts for 635 (Phase I) and 715 (Phase II) ADT. Changes from mixed industrial (LU) to LE and Heavy Industrial. Also some potential impacts to cultural resources. |
| 7 | MUP 00-012/<br>Minor Dev. 00-012-02/<br>L-14212/<br>P-00-012 TE<br>East Otay Mesa Auto Storage/Aaron Construction Auto Auction Park/ Insurance Auto Auctions | Northwest corner of Otay Mesa Road and Alta Road | Vehicle storage facility with weekly storage auctions. Temporary use (maximum five years). MND dated July 9, 2003 for MUP 00-012. Previous MUP expired on July 9, 2008. Application for time extension submitted on July 8, 2008. Letter dated August 26, 2008 requested further analysis. 38 acres | Significant and mitigable impacts identified for traffic in 2003 MND. Site is currently vacant. Potential impacts to biological resources, geology, hydrology, traffic, and paleontological resources. Mitigation required fair share traffic contributions to mitigate traffic impacts from addition of 354 ADT. |

**Table 3.27-2 (cont.)**
**ANTICIPATED CUMULATIVE LAND DEVELOPMENT PROJECTS AND IMPACTS**

| Map # | Identifying Project Number/ Project Name | Location | Proposed Improvements and Project Status | Environmental Summary |
|---|---|---|---|---|
| 8 | MUP 03-001/<br>Otay Mesa Auto Transfer/Rowland | Northeast corner of Otay Mesa Road and Enrico Fermi Drive | Storage area for operable vehicles as an interim use. 40.4 acres | MND dated June 24, 2005 relying on EOMSP with modifications. Significant and mitigable impacts identified for biological and cultural resources, paleontology, traffic, and geology. Mitigation measures included four acres of NNG credits, biological monitoring for burrowing owls and raptor breeding, cultural and paleontological monitoring, control of construction emissions and fugitive dust, geological requirements, landscape requirements, traffic improvements, and a fair share contribution for SR-905/Old Otay Mesa Road realignment. |
| 9 | MUP 88-020/<br>STP 00-070/<br>Bradley/Robertson Copart Salvage Auto Auctions | 7377 Otay Mesa Road.<br>Southwest corner of Otay Mesa Road at Alta Road | Modification of existing MUP to add a 300 feet by 140 feet auto storage facility on an existing graded auto storage lot. | First ND dated February 22, 1994. Second ND dated November 2, 2001 to increase the number of employees from 10 to 40, add 900 feet of additional leach line, and extend the expiration date of the interim permit from November 2000 to November 2005. January 3, 2007 letter requested supplemental technical information regarding hydrology, storm water management, traffic, aesthetics, route locations, and the preliminary grading plan. |
| 10 | TM 5505/<br>Otay Business Park (Paragon) | Southeast of future intersection of Alta Road and Airway Road. | Subdivision into 59 industrial lots, in four phases, from west to east. No specific uses identified. Water, sewer and storm drain lines would be extended into the project site. Off-site improvements include extensions of Alta Road, Airway Road and Siempre Viva Road. The future alignment of SR-11 may traverse a portion of the site. 161.6 acres | Scoping letter dated July 27, 2006. Supplemental EIR was requested May 30, 2007 for biology regarding preservation of vernal pools, storm water management, and easements.<br>Revised Request For SEIR dated April 23, 2008, listed potential impacts to Biological Resources. June 30, 2008 letter stated the County's acceptance of mitigation proposal. Mitigation for burrowing owl NNG habitat at a ratio of 1:1, with 0.5:1 on East Otay Mesa and the other 0.5:1 off East Otay Mesa in an area with the potential to support burrowing owls. Also identified as significant, were stormwater and drainage impacts.<br>First iteration of the SEIR dated October 30, 2008, requested further discussion in the SEIR and technical studies. Potential impacts identified in SEIR were air quality; biological resources (including WUS): project determined not to be consistent with the BMO, because it will impact all sensitive plant species on site. Impacts to sensitive animal species could occur also. More than five acres of raptor habitat might be impacted; cultural/paleontological resources; hazards; hydrology; noise; public services; transportation/ traffic; utilities and service systems. |
| 11 | STP-07-038/L14625<br>Vulcan-Otay Mesa Plant | East of Alta Road and Otay Mesa Road intersection | Proposed asphalt and concrete plants. 1,500 square feet of office space, 2,800 square feet of break area, and 28 parking spaces. 13.5 acres<br><br>NOD for grading of pad dated September 15, 2006. Approval of project relying on EOMSP EIR. Scoping letter for asphalt and concrete plant project dated October 29, 2007. | Grading project would impact 73.5 acres of NNG. Impacts to NNG will be mitigated at a 1:1 ratio by contributing $10,000 per acre of mitigation responsibility to the San Diego Foundation to be used for management of non-native grassland preserve areas on Otay Mesa. Letter received on August 13, 2007, stated impacts to project would be 2.06 acres of CSS, 10.9 acres of non-native grassland, mitigated by 8.54 acres off-site. Revised Scoping Letter from County dated November 29, 2007 deleted the request for an archaeological report. May 26, 2009 iteration requested further analysis for stormwater, air quality, traffic, and hydrology. |
| 12 | Maple Leaf Industrial/Piper Otay Park | West of SR-125, north of Otay Mesa Road/SR 905 and east of Piper Rancho Road | Subdivision into 13 industrial lots ranging in size from 1.03 to 2.61 acres. | Environmental Review Update Checklist Form for projects with Previously Approved Environmental Documents identified potential new impacts to biological resources, hazards, hydrology, and traffic which were not previously identified in the EOMSP EIR. Scoping Letter dated March 5, 2007 identified the same issues as above. Fourth Iteration of Initial Study stated further analysis of traffic impacts was needed. |
| 13 | TPM 21046<br>P06-102<br>93-19-006AA<br>California Crossings | Northwest corner of Otay Mesa Road and Harvest Road | A 352,502 square foot regional shopping center. 28.4 acres<br><br>Currently in Environmental analysis. EIR not yet available for public review. | Potential significant project impacts are to air quality (long-term mobile source emissions related to CO, VOC, and $PM_{10}$); traffic/Circulation (significant impacts to intersections and roadways); biological resources (direct loss of 23.4 acres of sensitive NNG habitat, loss to raptor foraging and nesting habitat, impacts to migratory birds [mitigation includes acquisition of a 15.4-acre conservation easement and distance restrictions of construction during raptor nesting season]); and cultural and paleontological resources. Impacts determined not to be significant are associated with geology/soils, hazards/hazardous materials, hydrology/water quality, noise, aesthetics, agriculture, land use and planning, mineral resources, population and housing, public services and utilities, and recreation. |

**Table 3.27-2 (cont.)**
**ANTICIPATED CUMULATIVE LAND DEVELOPMENT PROJECTS AND IMPACTS**

| Map # | Identifying Project Number/ Project Name | Location | Proposed Improvements and Project Status | Environmental Summary |
|---|---|---|---|---|
| 14 | International Industrial Park | Alta Road at Lonestar Road | Subdivide vacant land into 24 parcels for technology/business. 118.43 acres to be developed; 35.90 acres placed in open space; 16.26 acres used for internal circulation streets. Development planned to include three acres for the future permanent fire and sheriff station.<br><br>Scoping Letter, dated February 3, 2009. | Pre-Application letter dated July 23, 2007 listed biological resources as one of the major project issues. |
| **City of San Diego** | | | | |
| 15 | Cross Border Facility (previously known as Las Californias Center) | 8077 Siempre Viva Road. South of Siempre Viva Road and east of Britannia Blvd. | 75,000 square foot facility with a pedestrian bridge allowing access to the Tijuana International Airport.<br><br>This property has previously been approved for development with 31 industrial lots, as the Las Californias Center. 24.6 acres | Industrial subdivision (Las Californias Center) was approved by the City but not constructed. Federal environmental review process for the Cross-Border Facility project is complete; City environmental review process pending. Potential mitigable impacts to biological resources, unknown cultural resources, economic growth, air quality/global climate change, noise, and traffic were identified. |
| 16 | 5751<br>Just Rite | Northeast corner of Siempre Viva Road and Britannia Blvd. | 12 lots for industrial development. 38.68 acres | Environmental Initial Study Review in 2005. |
| 17 | Airway 18 Truck Terminal/Airway Auto Park Storage | Southeast corner of Britannia Blvd. and Airway Road | Truck terminal. | N/A |
| 18 | 50728<br>Lonestar/New Millenium | East of the intersection of Lonestar Road, La Media Road and SR-125 | 1,150 to 1,350 residential units and 70-80 thousand square feet of industrial development. 119 acres<br><br>Preliminary review opened 8/2/08. Application date change 6/18/08. | Pending information from the City. |
| 19 | 100619<br>Brown Field Technology Park | South of Otay Mesa Road and west of Britannia Blvd. | Subdivision to consolidate 21 parcels into 20 and vacated, dedicate and acquire easements for SR-905 for future industrial/business park development. 58.4 acres<br><br>Expedited processing for economic development. Approved April 14, 2009. | Potential issues related to public utilities, hydrology, noise and traffic. |
| 20 | Brown Field Airport Development Project | North of Otay Mesa Road, between Heritage Road and La Media Road | Development of general aviation uses, fixed base operations, hangars, restaurants, a new air and space museum, industrial area, solar generation facility, retail, transit, and other uses to support Brown Field Airport. | NA |
| 21 | Corrections Corporation of America | East of Alta Road and north of Calzada de la Fuente | Development of a 408,522-square-foot secure detention facility in two phases. The facility would include detention buildings to accommodate 2,132 beds and several other buildings for ancillary support services, as well as walled and partially covered outdoor recreation areas. Includes parking area and an equestrian trail. (37 acres) | No impacts beyond those assessed in the EOMSP EIR. |

NOP = Notice of Preparation; EIR = Environmental Impact Report; FEIR = Final Environmental Impact Report; ND = Negative Declaration; MND = Mitigated Negative Declaration; IS = Initial Study; NOD = Notice of Determination; PES = Preliminary Environmental Study; SEIR = Supplemental EIR; EOMSP = East Otay Mesa Specific Plan; SWMP = Storm Water Management Plan; WUS = Waters of the U.S.; NNG = Non-Native Grassland; DCSS = Diegan Coastal Sage Scrub; QCB = Quino Checkerspot Butterfly; BUOW = Burrowing Owl; BMO = Biological Mitigation Ordinance; HCP = Habitat Conservation Plan; ADT = Average Daily Traffic; SFR = Single-family residences; MFR = Multi-family residences; DU = Dwelling units; TM = Tentative Map; TPM = Tentative Parcel Map; STP = Site Plan; MUP = Major Use Permit; RP = Reclamation Plan; ZAP = Minor Use Permit; RPL = Replacement; SPA = Specific Plan Amendment; MSCP = Multiple Species Conservation Program; R/W = Right of Way; MSCP = Multiple Species Conservation Program; N/A = Not Available or Not Applicable.

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**Potential Cumulative Impacts**

For each resource carried forward in this analysis, the basis for conclusions regarding cumulative project impacts is the net impact of the proposed project (i.e., impact minus minimization and/or mitigation). If the impact is fully offset, it is concluded that there is no contribution to cumulative impacts from the proposed project.

Hazardous Waste/Materials

The RSA for hazardous waste/materials is comprised of the EOMSP area plus the portion of the OMCP area that is east of the SR-905/Britannia Boulevard Interchange. Of the 32 cumulative projects listed in Tables 3.27-2 and 3.27-3, the following projects identified the potential for impacts related to hazards or hazardous waste/materials: SR-905, I-805 South Managed Lanes, Otay Mesa POE Modernization, Reconfiguration and Expansion of the San Ysidro POE, Otay Hills Construction Aggregate Extraction Operation, Otay Business Park (Paragon), Maple Leaf Industrial/Piper Otay Park, and California Crossings. A potential cumulative impact related to hazardous waste/materials is, therefore, present in the RSA.

For the proposed project, project-specific impacts related to hazardous waste/materials would be avoided, minimized and mitigated through conformance with applicable regulatory requirements and implementation of mitigation measures. Similar measures would be required of other projects in the vicinity that contain or are adjacent to known hazardous materials sites. As a result, adverse cumulative impacts related to the increased exposure of people to public health and safety risks from hazardous materials would not occur.

Visual/Aesthetics

West of Enrico Fermi Drive, the project would generally be visually compatible with the surrounding developing industrial area. Between Sanyo Avenue and Enrico Fermi Drive, however, the project would construct up to approximately 26-foot high retaining walls in close proximity to existing industrial buildings, resulting in an adverse impact on the visual environment. Potential implementation of the SR-905/SR-125/SR-11 Full Interchange Design Variation for the project, along with previously approved elements of the SR-905/SR-125 Interchange would add to the cumulative visual impact by creating additional vertical concrete elements within the viewshed of the existing buildings and the immediate surrounding area. The project's contribution to the cumulative visual impact within the area west of Enrico Fermi Drive would be minimized via typical Caltrans landscape and architectural design measures as listed in Section 3.9. Similar minimizing measures would also be implemented within the SR-905/SR-125/SR-11 Interchange.

Tables 3.27-1 and 3.27-2 list a number of anticipated industrial developments that would surround the proposed project east of Enrico Fermi Drive. Although such development would conform with the EOMSP and OMCP, the cumulative effect would be to change this area from grassland to an overall industrial appearance. Visual impacts were identified for the Otay Mesa Recycled Water Supply Link, Otay Hills Construction Aggregate Extraction Operation, and Bradley/Robertson Copart Salvage Auto Auctions projects. If many of the proposed projects listed in Tables 3.27-1 and 3.27-2 are implemented in addition to the proposed project, the cumulative visual environment of the RSA east of Enrico Fermi Drive would change from primarily undeveloped grasslands to a developed highway, roadways and industrial buildings, as well as the governmental buildings and other facilities at the border within the POE site. The current views of wide expanses of open space would be lost. This change has been previously contemplated in the environmental documents for the EOMSP, and the updates to that plan,

but would nevertheless represent a substantial adverse cumulative visual impact, for which no avoidance, minimization or mitigation measures are available.

Transportation/Traffic

Section 3.8 of this EIR/EIS concludes that operation of the new Otay Mesa East POE would result in cumulative traffic impacts to select freeway segments, roadway segments and intersections in the project study area, as identified in Section 3.8.3. A number of measures are described in Section 3.8.4 that could reduce these traffic impacts, such that operations would be no worse than under the No Build Alternative. These measures should be considered in future transportation planning efforts for the study area in coordination with local entities, as SR-11 and the Otay Mesa East POE have been reflected in the EOMSP for many years. Because the implementation of these measures is beyond the control or responsibility of Caltrans, however, they are not proposed as part of the project.

Natural Communities

The RSA for natural communities (as well as the other biological resources discussed below) is comprised of the EOMSP area plus the portion of the OMCP area that is east of the SR-905/Britannia Boulevard Interchange. Of the 32 cumulative projects listed in Tables 3.27-2 and 3.27-3, 30 are within the RSA for natural communities (the San Ysidro POE expansion project and the I-805 Managed Lanes project are beyond the limits of the RSA). Of those projects for which anticipated environmental impact information was available, almost all cited the potential for impacts to biological resources. The EOMSP EIR (1993) noted that cumulative biological resources impacts were determined to be significant in a regional context, "especially given the number of other proposed and/or approved projects in the area and the sensitivity of the habitats in the SPA." Specific natural communities identified in the EOMSP EIR discussion as cumulatively impacted include coastal sage scrub and grassland. The SR-905 EIS/EIR (2004) noted that the cumulative biological resources impacts that have already occurred on Otay Mesa are substantial. A cumulative impact to natural communities is, therefore, present in the RSA.

For the proposed project, natural communities would be substantially and adversely impacted by project implementation. As discussed in Section 3.19, avoidance, minimization, or mitigation measures that could be applied to reduce impacts to natural communities associated with the proposed project include revegetation, restoration, and/or preservation of habitats. The cumulative land development projects listed in Tables 3.27-1 and 3.27-2 would be subject to the requirements of the MSCP and local biological protection and resource protection ordinances, with similar mitigation requirements to those listed in Section 3.19.

Grassland (including native, non-native, disturbed, and areas in the process of being restored to grassland) is the natural community most substantially impacted by the proposed project (up to approximately 203 acres) and the cumulative projects within the RSA (263.1 acres would be impacted by the Otay Crossings Commerce Park, 48.6 acres by Sunroad Centrum Tech Center, 38.52 acres by Saeed TM/Airway Business Center, 40 acres by Burke Minor Subdivision/Otay Logistics Center, 73.5 acres by Vulcan-Otay Mesa Plant, and 23.4 acres by California Crossings, among others.) Mitigation measures identified for the cumulative projects include grassland preservation and designation of open space. Mitigation measures for the proposed project, including the acquisition and management of off-site mitigation parcels to allow preservation of grassland and other natural communities, are expected to minimize the project's contribution to natural communities impacts. Similar measures would be required for the other cumulative projects in the RSA as well, pursuant to the MSCP, as well as local, state and federal regulatory requirements. The necessary compliance of the proposed project and all cumulative projects in the region with these requirements would mitigate the cumulative impacts associated with the proposed project.

Wetlands and Other Waters

There are 10 cumulative projects within the RSA for wetlands and other waters (the watershed in which the project is located). Of these 10 projects, 5 would impact or potentially impact wetlands and/or other waters, including SR-905, Otay Mesa Recycled Water Supply Link, Otay Crossings Commerce Park, Otay Hills Construction Aggregate Extraction Operation, and Otay Business Park (Paragon). Such impacts would be significant and mitigable. As discussed above, the EOMSP EIR (1993) noted that cumulative biological resources impacts were determined to be significant in a regional context, "especially given the number of other proposed and/or approved projects in the area and the sensitivity of the habitats in the SPA." Specific wetlands and other waters identified in the EOMSP EIR discussion as cumulatively impacted include wetland and non-wetland Waters of the U.S. A cumulative impact to wetlands and other waters is, therefore, present in the RSA.

As discussed in Section 3.20, wetlands and other waters would be impacted by project implementation. Avoidance, minimization, or mitigation measures that could be applied to reduce impacts to wetlands and other waters associated with the proposed project include restoration and/or preservation. The cumulative land development projects listed in Tables 3.27-1 and 3.27-2 would also be subject to the requirements of the MSCP, local biological protection and resource protection ordinances, CWA and Porter-Cologne Act, with similar mitigation requirements. The necessary compliance of the proposed project and all cumulative projects in the region with these requirements would mitigate the cumulative impacts associated with the proposed project.

Plant Species

As stated above, there are 32 cumulative projects within the RSA for biological resources. Of these projects, SR-905, Otay Crossings Commerce Park, and Otay Business Park (Paragon) are specifically identified in Table 3.27-2 as potentially impacting rare/non-listed sensitive plants, and many of the remaining cumulative projects are listed as impacting "sensitive species" or "biological resources." As previously mentioned, the EOMSP EIR (1993) noted that cumulative biological resources impacts were determined to be significant in a regional context. Specific plants identified in the EOMSP EIR discussion as cumulatively impacted include San Diego barrel cactus and San Diego County viguiera. A cumulative impact to non-listed sensitive plant species is, therefore, present in the RSA.

For the proposed project, individual plant species would be substantially and adversely impacted by project implementation. As discussed in Section 3.21, avoidance, minimization, or mitigation measures that could be applied to reduce the project's direct impacts to sensitive plant species include salvage and translocation of individual plant species and preservation within the Lonestar parcels. The cumulative land development projects listed in Tables 3.27-1 and 3.27-2 would be subject to the requirements of the MSCP and local biological protection and resource protection ordinances, with similar mitigation requirements. The necessary compliance of the proposed project and all cumulative projects in the region with these requirements would mitigate the cumulative impacts associated with the proposed project.

Animal Species

As stated above, there are 32 cumulative projects within the RSA for biological resources. Of these projects, six are identified in Table 3.27-3 as potentially impacting non-listed sensitive animal species, including SR-905, Otay Crossings Commerce Park, Sunroad Centrum Tech Center, Saeed TM/Airway Business Center, Otay Mesa Auto Transfer/Rowland, and Otay Business Park (Paragon), while nine others are identified as impacting "sensitive species" or "biological resources." Impacted species include coastal western whiptail, California horned lark, loggerhead shrike, grasshopper sparrow, burrowing owl, and northern harrier. Impacts to raptor foraging habitat are also noted for some projects. As previously mentioned, the EOMSP EIR (1993) noted that cumulative biological resources impacts were determined

to be significant in a regional context, including impacts to burrowing owls. A cumulative impact to non-listed sensitive animal species is, therefore, present in the RSA.

For the proposed project, individual animal species would be substantially and adversely impacted by project implementation. As discussed in Section 3.22, avoidance, minimization, or mitigation measures that could be applied to reduce impacts to animal species associated with the proposed project include pre-construction surveys to verify the presence or absence of nesting birds, avoiding grading and vegetation clearing during the bird breeding season, habitat preservation within the Lonestar parcels, and passive relocation of burrowing owls. The cumulative land development projects listed in Tables 3.27-1 and 3.27-2 would be subject to the requirements of the MSCP and local biological protection and resource protection ordinances, with similar mitigation requirements. The necessary compliance of the proposed project and all cumulative projects in the region with these requirements would mitigate the cumulative impacts associated with the proposed project.

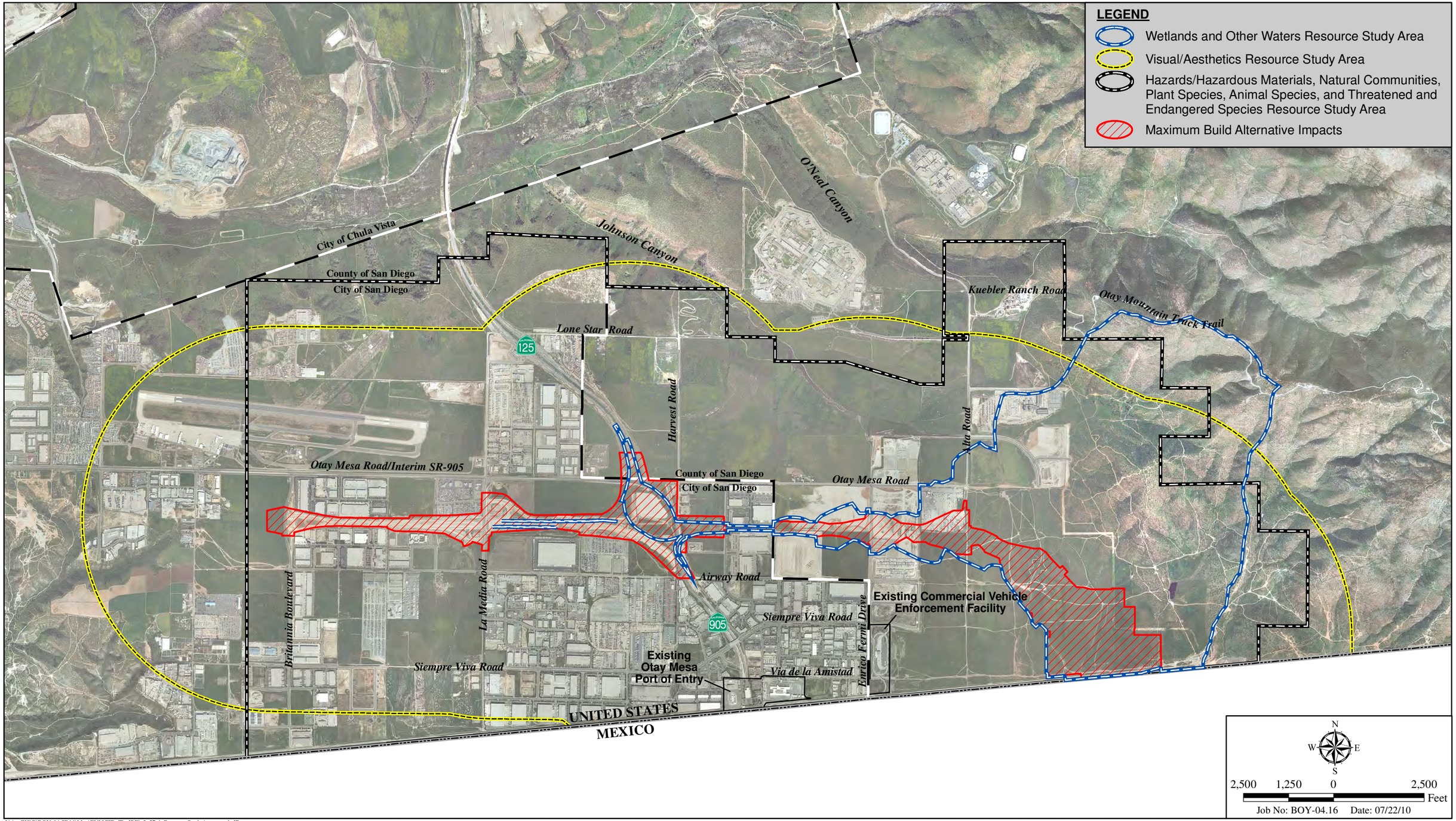
Threatened and Endangered Species

Of the 32 cumulative projects within the RSA for biological resources, 4 are specifically identified in Table 3.27-2 as impacting threatened and endangered species, including Otay Mesa Road Widening, Otay Crossings Commerce Park, Sunroad Centrum Tech Center, and Otay Business Park (Paragon), while other cumulative projects are called out as impacting "sensitive" plants and/or animals or "biological resources," which may include threatened and/or endangered species. Listed species that would be impacted by cumulative projects in the RSA include San Diego button celery, Quino checkerspot butterfly, and San Diego and Riverside fairy shrimp. As previously mentioned, the EOMSP EIR (1993) noted that cumulative biological resources impacts were determined to be significant in a regional context. A cumulative impact to threatened and endangered species is, therefore, present in the RSA.

For the proposed project, one listed as federally endangered animal species (Quino checkerspot butterfly) would be substantially and adversely impacted by project implementation. In addition, the proposed project would impact critical habitat for San Diego fairy shrimp and Quino checkerspot butterfly. As discussed in Section 3.23, avoidance, minimization, or mitigation measures that could be applied to reduce impacts to Quino checkerspot butterfly include the off-site preservation and enhancement of habitat within the Lonestar parcels. Mitigation also would include the preservation of parcels containing vernal pools. The cumulative land development projects listed in Tables 3.27-1 and 3.27-2 would also be subject to the requirements of the MSCP, local biological protection and resource protection ordinances, FESA, and CESA, with similar mitigation requirements. The necessary compliance of the proposed project and all cumulative projects in the region with these requirements would mitigate the cumulative impacts associated with the proposed project.

Conclusion

Resources substantially impacted by the proposed project and in poor or declining health include transportation/traffic (section 3.8), visual/aesthetics (Section 3.9), hazardous waste/materials (Section 3.15), natural communities (Section 3.19), wetlands and other waters (Section 3.20), plant species (Section 3.21), animal species (Section 3.22), and threatened and endangered species (Section 3.23). For each of these issues, mitigation or minimization measures proposed for the project, together with the mitigation measures required for other cumulative projects in the area, would reduce the overall cumulative impact to the affected resources. Impacts to hazardous waste/materials, natural communities, wetlands and other waters, plant species, animal species, and threatened and endangered species would be reduced to the extent that these impacts would no longer be substantial. Cumulative impacts to visual resources and transportation/traffic would remain substantial and adverse.

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# Cumulative Resource Study Areas

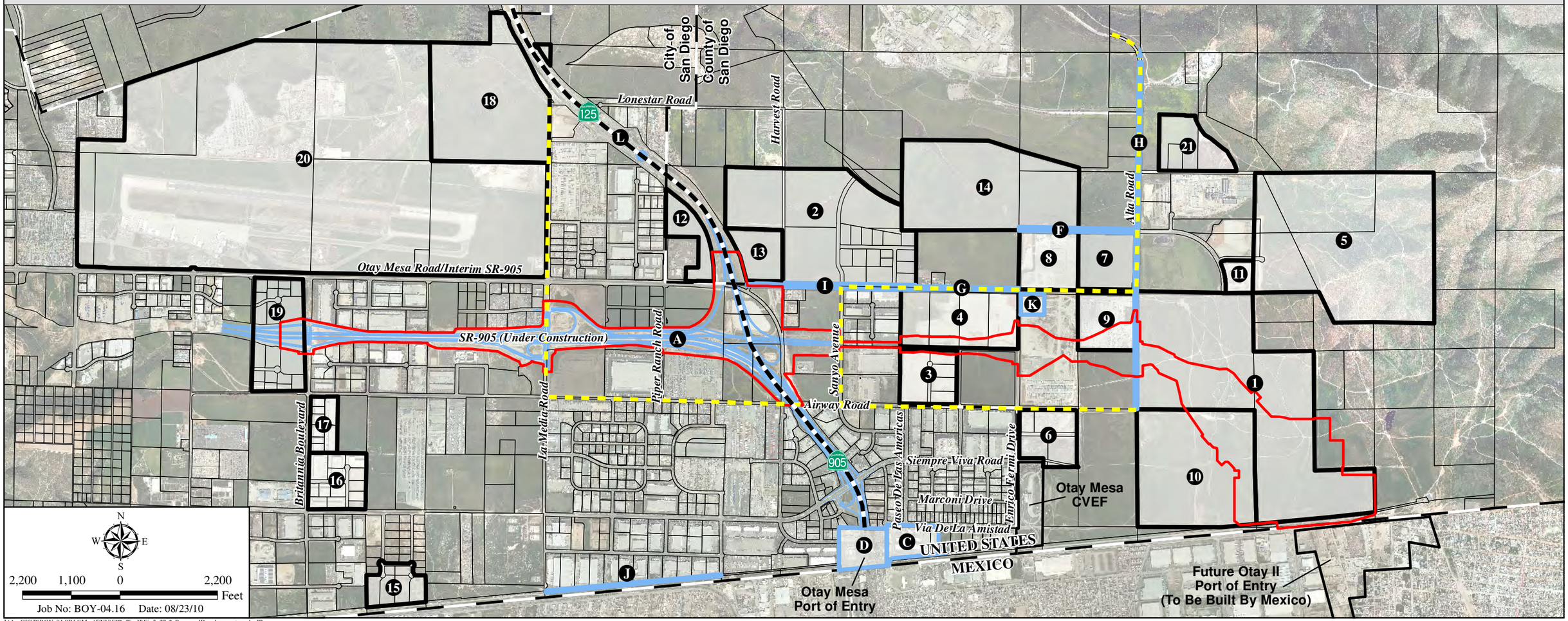
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.27-1

## LEGEND

- Maximum Limits of Project Alternatives and Variations
- **Cumulative Projects - Private**
- **1** Otay Crossings Commerce Park
- **2** Sunroad Centrum Tech Center
- **3** Saeed TM/Airway Business Center
- **4** Dillard and Judd Roll County LLC/Enrico Fermi Industrial Park
- **5** Otay Hills Construction Aggregate Extraction Operation
- **6** Burke Minor Subdivision/Otay Logistics Center
- **7** East Otay Mesa Auto Storage/Aaron Construction Auto Park
- **8** Otay Mesa Auto Transfer/Rowland
- **9** Bradley/Robertson Copart Salvage Auto Auctions
- **10** Otay Business Park (Paragon)
- **11** Vulcan Otay Mesa Plant
- **12** Maple Leaf Industrial/Piper Otay Park
- **13** California Crossings
- **14** International Industrial Park
- **15** Cross Border Facility
- **16** Just Rite
- **17** Airway 18 Truck Terminal/Airway Auto Park Storage
- **18** Lonestar/New Millenium
- **19** Brown Field Technology Park
- **20** Brown Field Airport Development Project
- **21** Corrections Corporation of America
- **Cumulative Projects - Public**
- **A** SR-905 and SR-905/SR-125 Interchange (Under Construction)
- **B** I-805 Managed Lanes South[1]
- **C** U.S. Cargo Import Facility Improvements at Existing Otay Mesa POE
- **D** Otay Mesa POE Modernization Project
- **E** Reconfiguration and Expansion of the San Ysidro POE[1]
- **F** Lonestar Road
- **G** Otay Mesa Road Widening (County)
- **H** Otay Mesa Recycled Water System Capital Improvement Program R2087, R2077, R2058 Project
- **I** Otay Mesa Road Widening (City)
- **J** Otay Truck Route Widening
- **K** SDRFPD Fire Station
- **L** South Bay Bus Rapid Transit

[1] Not shown on map.

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# Anticipated Cumulative Development within the Project Vicinity

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II EIR/EIS

Figure 3.27-2


# Chapter 4
# CEQA Evaluation

# CHAPTER 4.0 – CEQA EVALUATION

## 4.1 DETERMINING SIGNIFICANCE UNDER CEQA

The proposed project is a joint project by Caltrans and FHWA and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. Caltrans is the lead agency under CEQA and FHWA is the lead agency under NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance. Appendix M of this EIR/EIS includes a CEQA Checklist.

This EIR/EIS constitutes a tiered (Tier II) document of the environmental program (i.e., tiered from and based on the Phase I Program PEIR/PEIS), and addresses the project accordingly, pursuant to applicable elements of the CEQA Statues (Public Resources Code Sections 21093 and 21094) and the CEQA Guidelines (Section 15152). The referenced regulatory sections require specific determinations regarding the necessity of subsequent environmental review, under Section 21094(b) of the CEQA Statues and Section 15152(f) of the CEQA Guidelines. In addition, findings and analysis regarding subsequent environmental review would be provided pursuant to Sections 15162 and 15168(c) of the CEQA Guidelines.

Based on the above discussion, the following document is hereby incorporated by reference pursuant to Section 15150 of the CEQA Guidelines:

- State Route 11 and the Otay Mesa East Port of Entry: Final Program Environmental Impact Report/Phase I Environmental Impact Statement (Caltrans 2008a)

The Phase I EIR/EIS evaluated the impacts of alternative locations for the proposed project and is relied upon to support the selection of the Western Alternative as the location for the design alternatives evaluated in this Tier II EIR/EIS. It was determined that the Tier II document would address all of the environmental issues that were also evaluated in Phase I, to facilitate analysis and comparison of the various design alternatives under consideration in Tier II and to update the impact analysis based on the greater level of detail now known concerning project implementation.

## 4.2 LESS THAN SIGNIFICANT EFFECTS OF THE PROPOSED PROJECT

### 4.2.1 Less Than Significant Effects with No Mitigation

With the implementation of BMPs and other practices included in Caltrans' standard specifications, the project alternatives and variations would result in no environmental impacts or less than significant environmental impacts (with no mitigation) at both the project and cumulative levels for the following issues identified in Appendices F and G of the CEQA Guidelines:

- Agricultural Resources (refer to the introduction to Chapter 3.0 of this EIR/EIS)
- Air Quality (refer to Section 3.16 of this EIR/EIS)
- Cultural Resources (refer to Section 3.10 of this EIR/EIS)
- Geology and Soils (refer to Section 3.13 of this EIR/EIS)
- Hazardous Waste/Materials (refer to Section 3.15 of this EIR/EIS)
- Hydrology and Water Quality (refer to Sections 3.11 and 3.12 of this EIR/EIS)
- Land Use Planning (refer to Sections 3.1 and 3.4 of this EIR/EIS)
- Mineral Resources (refer to Section 3.13 of this EIR/EIS)
- Population and Housing (refer to Sections 3.3, 3.4, and 3.5 of this EIR/EIS)
- Utilities and Public Services (refer to Section 3.7 of this EIR/EIS)
- Recreation (refer to the introduction to Chapter 3.0 and Section 3.4 of this EIR/EIS)
- Energy (refer to Section 3.18 of this EIR/EIS)
- Noise (refer to Section 3.17 and the additional discussion below)

A discussion of the less than significant impacts associated with each of these issues is provided in the referenced sections in Chapter 3.0. For many of these issues, the potential impacts would be addressed via compliance with regulatory requirements or standard Caltrans practices and specifications, which do not qualify as mitigation. Compliance with these standard requirements would avoid the potential significant impacts, as described in the above referenced sections. Because the CEQA approach to noise impact analysis varies from the NEPA approach, additional CEQA analysis of the proposed project's potential for noise impacts is presented below.

**Noise**

When determining whether a noise impact is significant under CEQA, a comparison is made between the baseline noise level and the build noise level. The CEQA noise analysis is completely independent of the NEPA analysis discussed in Section 3.17, *Noise*, which is centered on noise abatement criteria. Under CEQA, the assessment entails evaluating the setting of the noise impact and then how substantial the noise increase would be in the given area. Key considerations include the ambient noise level, the sensitivity of surrounding noise receptors, the magnitude of the noise increase, and the number of receptors affected.

The noise receptors in the project area were evaluated based on a comparison of future predicted cumulative noise levels with and without the project; both of these scenarios would include operation of SR-905 (currently under construction). An increase of three dBA or less is not perceptible to the human ear.

*Construction Noise Impacts*

Noise produced by construction equipment required to build the project would occur with varying intensity and duration during the different phases of construction. Construction is expected to occur from

approximately 2013 to 2015. Typically, construction activities would occur on weekdays between the hours of 7:00 AM and 7:00 PM; however, nighttime construction may also occur.

Construction activities would result in a short-term, temporary increase in the ambient noise level. The increase in noise level would primarily be experienced close to the noise source. The magnitude of the impact would depend on the type of construction activity, noise level generated by various pieces of construction equipment, duration of the construction phase, and distance between the noise source and receiver.

Construction equipment would generate a noise level between approximately 70 dBA and 90 dBA at 50 feet from the source (refer to Table 3.17-5). Noise levels generated by construction equipment (or by any "point source") decrease at a rate of approximately six dBA per doubling of distance away from the source. Therefore, at a distance of 100 feet, noise levels would be approximately six dBA lower than the levels at the 50 feet reference distance. The average sound level at construction sites is typically less than the maximum noise level because the equipment operates in alternating cycles of full power and low power. Also, the equipment rotates in various directions (i.e., varying the exposure of the noisiest side of the equipment and the quieter sides of the equipment toward each receptor) and moves around the construction site, especially during clearing, grubbing and grading activities. Thus, the average noise levels produced would be less than the maximum level.

With the exception of the Southwestern College campus, no noise-sensitive uses occur immediately adjacent to the project site; adjoining parcels are either undeveloped (designated industrial) or developed with industrial uses. The closest residences to the proposed construction activities are located approximately 1,200 feet north of proposed SR-11 along the north side of Otay Mesa Road; at this distance, project-related construction noise would be attenuated below a level of significance. Per Caltrans Standard Specifications Section 7-1.01(I) (Caltrans 2006d), required contractor compliance with applicable local noise standards would avoid or minimize temporary noise from construction at the Southwestern College campus, as well as at nearby industrial properties. In general, construction noise would be short-term and intermittent, and would comply with Caltrans' Standard Specifications 7-1.01(I). Short-term noise impacts during construction would be less than significant.

With regard to cumulative construction noise, each cumulative project listed in Table 3.27-2 would produce temporary construction noise. As with the proposed project, construction schedules and construction noise equipment levels would vary depending on the type of equipment and its duration of use. Construction schedules of the various projects may not overlap and each project would have to limit construction hours and noise exposure to be in compliance with local construction noise ordinances. Because construction noise generally does not exceed allowable levels beyond 200 feet from the property line of projects under construction, noise-sensitive receptors would not be exposed to construction noise from multiple projects, and cumulative construction noise impacts would not be significant.

*Groundborne Vibration*

Groundborne vibration may occur during periods of earthmoving and use of heavy construction equipment. In general, the discussion of construction noise, above, is applicable to the production of groundborne vibration. The magnitude of the impact from groundborne noise and vibration would depend on the type of construction activity, noise level generated by various pieces of construction equipment, duration of the construction phase, and distance between the noise source and receiver. In general, groundborne noise and vibration associated with construction would be short-term and intermittent, and would comply with Caltrans' Standard Specifications 7-1.01(I) (Caltrans 2006d). Short-term vibration impacts during construction would be less than significant.

*Operational Noise Impacts*

Transportation Noise. Table 4-1 shows the predicted peak hour noise levels associated with the project build alternatives at the only sensitive receptor locations in the study area (R-10 and R-11), which represent the Southwestern College campus (refer to Figure 3.17-1). These data are compared with predicted noise levels at these locations under the No Build scenario, which, as previously noted, would include operation of SR-905 (approved in 2004 and currently under construction). As seen in the tables, noise levels would increase by less than one dBA at these two receptor locations; with rounding, there would be no difference. Since an increase of less than three dBA is not perceptible to the human ear, noise impacts associated with any of the build alternatives would be less than significant under CEQA.

**Table 4-1**
**FUTURE NOISE LEVELS AT SENSITIVE RECEPTOR LOCATIONS**
**PROECT BUILD ALTERNATIVES**

| Receptor | Peak Hour Noise Level | | |
|---|---|---|---|
| | No Build | Build | Change in Noise Level |
| R-10 | 74 | 74 | 0 |
| R-11 | 75 | 75 | 0 |

Potential cumulative transportation noise impacts must be considered at the two existing sensitive noise locations in the project vicinity, i.e. the Southwestern College campus (receptors R-10 and R-11), and the three existing residences identified on Otay Mesa Road. At Southwestern College, Table 3.17-3 in Section 3.17 indicates that a noise level increase of 17 dBA can be expected by year 2035 under LOS C traffic conditions (worst case noise conditions), with or without the proposed project. As noted above, this noise would be primarily due to traffic noise on SR-905, which was an approved project prior to the approval and construction of the college campus. The project would not result in a noise increase over the baseline cumulative noise impacts following construction of SR-905 and the Southwestern College adjacent to the freeway, and would therefore have a less than significant contribution to cumulative noise impacts to the college.

The three existing residences identified on Otay Mesa Road are located approximately 1,200 feet from the proposed project, beyond a reasonably expected project noise impact distance. Otay Mesa Road is directly adjacent to the homes and would have a noise impact higher than SR-11 at this distance. Consequently, the project would have a less than significant contribution to cumulative noise at the three identified residences.

Stationary Noise. Project-generated stationary noise sources would be associated with the POE and CVEF, which would be located entirely within County jurisdiction, and would be surrounded by planned industrial uses, including several active development applications with the County. A swathe of land approximately 1,200 to 1,500 feet north of the proposed CVEF that is designated for rural residential development under the EOMSP could feature large-lot residential use (20-acre minimum) at some time in the future, but there are no current residences or current residential projects in this area.

POE design/operations details have not yet been identified, pending completion of the PDS for the POE, but the facility is anticipated to incorporate the following typical varied-level noise sources: outdoor mechanical equipment (air compressors, pumps, fans and cooling towers), truck deliveries, loading dock activities including forklifts, and maintenance activities (parking lot sweepers, trash collection trucks and

outdoor paging systems). A sewer pump and one or more electricity generators are also anticipated on the POE site. The one-hour average sound level at 50 feet from typical industrial installations having similar types of equipment and activities, ranges from approximately 60 to 75 dBA with appropriate muffling and shielding, depending on the equipment and the intensity of use (i.e., duty cycle). These noise levels are typical of an industrial zone. In addition, each idling truck within the POE and CVEF would be expected to generate noise in the range of approximately 65 to 75 dBA. These noise levels would be compatible with surrounding existing and planned industrial uses. Existing residences and currently proposed residential development are sufficiently distant for stationary noise generated by operational activities at the POE and CVEF to be attenuated below a level of significance. Impacts would be less than significant.

With respect to cumulative stationary noise, all of the cumulative projects proposed in the land use study area are industrial in character, would not result in the construction of new noise-sensitive uses, and would be required to comply with the noise limits set by the County and City. The closest currently proposed residential projects that would result in the construction of new noise-sensitive uses are located over five miles from the project site, within the City. In addition, although the three identified homes along Otay Mesa Road could be exposed to stationary noise from other closer projects in the County's jurisdiction, the project contribution to cumulative stationary noise impacts would not be significant because the intervening related projects would both shield and mask the POE/CVEF noise and would be required by the County to limit noise levels at their property lines to the noise limits set by the County and City.

Airport Noise. Two airports, Brown Field and Tijuana International Airport, are located near the proposed project. However, the proposed POE/CVEF, which is the only part of the project that would include buildings with employees, is not located within a Comprehensive Land Use Plan (CLUP) for airports; within the 60 CNEL contour zone of either Brown Field or Tijuana International Airport; within one mile of a private airstrip; or within two miles of a public airport or a public use airport. No noise sensitive land uses are proposed. Therefore, the project would not expose people in the project area to excessive airport-related noise levels.

### 4.2.2 Less Than Significant Effects After Mitigation

For the following issues identified in Appendices F and G of the CEQA Guidelines, the project alternatives and variations have the potential to result in significant impacts to the environment at the project and/or cumulative levels, but measures are available to be implemented that would avoid, mitigate or reduce potentially significant impacts to below a level of significance:

- Paleontological Resources (refer to Section 3.14 of this EIR/EIS)
- Biological Resources (project and cumulative levels:
    - Natural communities (refer to Section 3.19)
    - Wetlands and other waters (refer to Section 3.20)
    - Three special status plant species; i.e., variegated dudleya, San Diego barrel cactus, and decumbent goldenbush (refer to Section 3.21)
    - Twelve special status animal species, including burrowing owls (refer to Section 3.22)
    - Two federally listed endangered species; i.e., San Diego fairy shrimp and the Quino checkerspot butterfly (refer to Section 3.23)
    - Invasive plant species (refer to Section 3.24)

A discussion of the potentially significant impacts and measures to mitigate impacts to paleontological and biological resources to below a level of significance are included in Sections 3.14, and 3.19 through 3.24.

## 4.3 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT (MANDATORY FINDINGS OF SIGNIFICANCE)

In accordance with CEQA, Caltrans must find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where any of the following conditions occur:

1. The project has the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered species, or eliminate important examples of the major periods of California history or prehistory.

2. The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

3. The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

**Significant Impacts to Biological and Cultural Resources (Item 1)**

As discussed above and in Section 4.2.2, the project build alternatives do have the potential to result in significant impacts to biological resources, per item (1) above; however, avoidance, minimization and mitigation measures discussed in Sections 3.19 through 3.24 would reduce both project-level and cumulative impacts to biological resources to below a level of significance. As noted in Section 4.2.1, with the implementation of practices included in Caltrans' standard specifications, the project alternatives and variations would result in less than significant environmental impacts to cultural resources (with no mitigation) at both the project and cumulative levels.

**Cumulative Impacts (Item 2)**

With regard to item (2) above, as discussed in Section 3.27, *Cumulative Impacts*, the project build alternatives could potentially result in cumulative impacts related to biological resources, traffic/transportation and visual resources.

Avoidance, minimization and mitigation measures discussed in Sections 3.19 through 3.24 would reduce cumulative biological impacts to below a level of significance.

Operation of the new Otay Mesa East POE would result in cumulative traffic impacts to select roadway segments and intersections in the project study area. A number of measures are described in Section 3.8.4 that could reduce these traffic impacts, such that operations would be no worse than under the No Build Alternative. These measures should be considered in future transportation planning efforts for the study area in coordination with local entities, as SR-11 and the Otay Mesa East POE have been reflected in the EOMSP for many years. Because the implementation of these measures is beyond the control or responsibility of Caltrans, however, they are not proposed as part of the project and significant, unmitigated cumulative traffic impacts would remain.

The project build alternatives also could contribute to cumulative visual impacts in the project area. Although this would be part of a planned transition from a largely open and undeveloped grassland area to a more urban and industrial setting, cumulative visual impacts would be significant and unmitigable.

These unmitigable traffic and visual impacts are discussed in greater detail in Section 4.4, *Unavoidable Significant Environmental Effects*, and would require that Caltrans make Findings and adopt a Statement of Overriding Considerations. No other potential cumulative impacts would occur under the project build alternatives.

**Effects on Human Beings (Item 3)**

With regard to item (3) above, with the implementation of BMPs and other practices included in Caltrans' standard specifications, the project build alternatives would result in less than significant impacts related to subsurface hazardous materials and on-site use and/or storage of hazardous materials such as vehicle fuels. Similarly, air quality, energy, hydrology, water quality, noise, and other potential impacts to human beings listed in Section 4.2.1 would be less than significant. Nevertheless, cumulative impacts to traffic and the visual environment associated with the project build alternatives would constitute significant, unmitigable impacts to human beings.

## 4.4 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

For many issues, measures can be implemented that would avoid, mitigate or reduce potentially significant environmental impacts to below a level of significance. These issued are listed above in Sections 4.2.1 and 4.2.2, and associated measures that would avoid, mitigate or reduce such impacts to below a level of significance are provided in the referenced sections in Chapter 3.0. For other issues, adequate remedies are not available, so impacts would remain significant and unmitigable. These issues are:

- Transportation/Traffic (project and cumulative levels; refer to Section 3.8 of this EIR/EIS)
- Visual/Aesthetics (cumulative level only; refer to Section 3.9 of this EIR/EIS)

Although mitigation measures are proposed for these issues, their implementation would not fully mitigate impacts; these impacts would remain significant and unmitigable, and are discussed below.

**Transportation/Traffic**

According to the State CEQA Guidelines, potentially significant impacts could occur to transportation/traffic if the project would increase traffic such that there would be a substantial increase in the number of vehicle trips, volume to capacity ratio on roads, or congestion at intersections, or such that a level of service standard would be exceeded.

*Construction-related Traffic*

During heavy periods of hauling imported fill material to the project site, it is estimated that up to 300 truck trips per day could be generated. Additional traffic generated by project construction would include construction employees traveling to and from the site each day, hauling of demolition debris off site in the early stages of clearing/grading for the project, and delivery of construction materials to the site periodically. Project construction-related trips could result in increased congestion of local streets and freeways in the project area. According to the TMP for the project, temporary full or partial closures of SR-905, Sanyo Avenue, Enrico Fermi Drive, and Alta Road are anticipated to be necessary. Detour routes at various times during construction would likely include Otay Mesa Road, Airway Road, La

Media Road and Sanyo Avenue. These road closures and detours could cause motorist delays on existing roads during construction, and would represent significant, unavoidable, and unmitigable temporary impacts.

*Operational Traffic*

As discussed in Section 3.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, in 2035, the build alternatives were identified as having an impact on the operations of local roadway segments and intersections if the build alternatives would worsen the LOS to E or F compared to the No Build Alternative, or would maintain an LOS E or F but would worsen the V/C ratio compared to the No Build Alternative. These impacts would be considered significant under CEQA. For freeway segments, a significant impact would be assessed under CEQA if the build alternatives would worsen the LOS to F compared to the No Build Alternative, or would maintain an LOS F but would worsen the V/C ratio compared to the No Build Alternative. It should be noted that the project would also improve operations for many local roadway segments and intersections, as well as freeway segments.

The locations where potential future significant impacts would likely occur following project implementation are identified in Section 3.8. For these locations, measures to avoid or minimize the affected conditions such that operations would be no worse than with the No Build Alternative should be considered in future planning of the transportation system in the traffic study area.

The proposed project would implement SR-11 and the Otay Mesa East POE, which have been reflected in the EOMSP for many years. While it is beyond the jurisdiction of Caltrans to require amendments to the City and County circulation elements for the Otay Mesa region, the analysis presented in Section 3.8 provides guidance as to the types of modifications that would be necessary to achieve acceptable LOS in the region in 2035, and demonstrates that feasible measures exist. The implementation of such measures is beyond the control or responsibility of Caltrans, however, so under CEQA, project-level and cumulative traffic impacts would remain significant, unavoidable, and unmitigable.

**Visual/Aesthetics**

According to the State CEQA Guidelines, potentially significant impacts may occur to visual resources if the project would have a substantial adverse effect on a scenic vista; would substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway; would substantially degrade the existing visual character or quality of the site and its surroundings; or would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Just east of Sanyo Avenue, the project would construct up to approximately 26-foot high retaining walls in close proximity to existing buildings, resulting in an adverse project-level impact on the visual environment. The project's visual impact at this location, as well as its contribution to the cumulative visual impact within the Sanyo Avenue area would be minimized via typical Caltrans landscape and architectural design measures, as listed in Section 3.9. This direct project impact would therefore be significant but mitigated.

The visual study area is not characterized by distinct visual features, public visual resources or a designated state scenic highway, focal points or a consistent neighborhood theme. West of Enrico Fermi Drive, the project would generally be visually compatible with the character and quality of the surrounding developing industrial area; however, the visual character to the east of Enrico Fermi Drive is most memorable for its generally open and undeveloped condition. While the proposed project is included in existing planning documents and would be constructed to applicable design standards, it

would introduce a new highway with associated ramps and interchanges; landform alteration and manufactured slopes up to 20 feet in height; retaining walls; border crossing, inspection, possible toll facilities; and lighting to an area that is currently in a largely natural state. Views would be altered from various vantage points throughout the project viewshed, including the recreational Otay Mesa Truck Trail. Cumulatively, the proposed project in combination with other anticipated development in eastern Otay Mesa would considerably change the visual environment of the area from open space to urban uses, and would contribute to cumulative visual impacts within the EOMSP area following project implementation. While the mitigation measures listed in Section 3.9 would serve to avoid and minimize project-specific impacts, cumulative impacts under CEQA would remain significant, unavoidable, and unmitigable.

## 4.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Considerable amounts of land, fossil fuels, labor, construction materials, and state and federal funds would be expended in the construction and operation of the proposed project. These would result in generally irreversible environmental changes; however, the benefits of the project are expected to outweigh the commitment of these resources. Refer to Section 3.26, *Irreversible and Irretrievable Commitments of Resources that would be Involved in the Proposed Project*, for more detailed discussion of this issue.

## 4.6 GROWTH-INDUCING IMPACTS

The State CEQA Guidelines require an EIR to "discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth" (CEQA Guidelines Section 15126.2[d]). This could include any reasonably foreseeable physical or regulatory change that would remove a restriction to or encourage population growth in an area, including new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; accelerated conversion of homes to commercial or multi-family use; or regulatory changes such as general plan amendments, specific plan amendments, or zone reclassifications. In general, when discussing growth, the CEQA Guidelines point out that "it must not be assumed that growth in any area is necessarily beneficial, detrimental or of little significance to the environment" (CEQA Guidelines Section 15126.2[d]).

Section 3.3, *Growth*, concludes that there is little potential for growth influence and consequent growth-related impacts in the land use study area due to the proposed project build alternatives or variations, because most of the area in the vicinity of the project is already the subject of active development applications in progress with the County and City. In addition, the pattern of development would be expected to easily adjust to accommodate the project limits, because these facilities have been indicated conceptually on planning documents for many years, and currently reflect the approximate location of the proposed project.

The project purpose includes objectives to increase inspection processing capacities, reduce northbound vehicle and pedestrian queues and wait times to cross the border, and accommodate projected increases in international trade and personal cross-border travel at POEs in the San Diego-Tijuana region. In other words, part of the purpose of the project is to remove a bottleneck or obstacle to trade, travel, and ultimately growth in the region and beyond. As noted in Chapter 1.0, the January 2006 SANDAG/Caltrans study entitled *Economic Impacts of Wait Times at the San Diego-Baja California Border* concludes that border delays discourage cross-border personal trips, and result in increased transportation costs and interruptions in the manufacture and delivery of goods, costing the U.S. and Mexican economies an estimated US$6 billion in gross output and 51,325 jobs in 2005

(SANDAG/Caltrans 2006a). The study estimates that economic losses incurred by the regional and national economies will more than double in the next ten years, unless substantial improvements in border crossing and transportation infrastructure and management take place. The project CIA estimates more conservatively that, by the project horizon year of 2035, the total annual economic output generated by the reduced border wait time for commercial border crossings alone as a result of any of the build alternatives would range from a low estimate of $297 million and 1,575 jobs to a high of $1.63 billion and 8,807 jobs for the San Diego regional economy. On a national level, economic output and employment generated would be approximately three times these figures.

As noted in Section 3.3, as population and trade in the border region grow in the future, wait times are likely to rise, at some point surpassing the maximum time periods that many border crossers would be willing to wait. If the border continues to be a bottleneck, this could result in a curtailment of growth in the maquiladora industry near the border, and cap other types of border crossings for employment, tourism, shopping and other purposes that are vital to the economic health of the region.

As discussed in Section 3.3, the result of the unmet demand for border crossings in the San Diego/Tijuana region could cause the demand to be exported to other ports and modes of transport. Indirectly, a continued bottleneck at the land border crossings for vehicles, due to the failure to implement a planned new border crossing, could result in increased demand to transport goods and services via the region's airports, ocean ports and rail terminals and lines, resulting in potential pressure to implement unplanned expansions of these facilities, with associated potential adverse impacts to environmental resources.

Thus, the No Build Alternative could influence the location and levels of growth outside the immediate land use study area. In the same way, any of the build alternatives could influence the location and levels of growth in the larger region, state and country. In fact, growth patterns in other countries could also be affected; for instance, if production in Mexico for the U.S. market were to be replaced by production in other countries because of increased transportation costs at the U.S. - Mexico border.

Accordingly, the proposed project has the potential to "foster economic or population growth", as defined in the CEQA Guidelines, by removing an obstacle to that growth, i.e. the border crossing bottleneck. Identification and analysis of growth-induced environmental impacts of the project, however, would be speculative, because of the diffused geographical and temporal nature of this growth. The probable existence of future growth may be reasonably foreseeable, but its location and extent is not. CEQA guidance indicates that a Lead Agency is not required to analyze a particular impact that has been found to be too speculative for evaluation (CEQA Guidelines Section 15145). Nevertheless, it is worth noting that wherever the growth associated with the proposed project were to occur, it would be subject to the land use and environmental plans and regulations applicable to that location.

## 4.7 CLIMATE CHANGE

### Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide ($CO_2$), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. Assembly Bill 1493 requires the ARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the EPA. The waiver was denied by EPA in December 2007. See California v. Environmental Protection Agency, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that EPA will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed EO S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." EO S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With EO S-01-07, Governor Arnold Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the EPA to regulate GHG as a pollutant under the CAA (Massachusetts vs. Environmental Protection Agency et al., 549 U.S. 497 (2007). The court ruled that GHG does fit within the CAA's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases-- $CO_2$, methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$)--in the atmosphere threaten the public health and welfare of current and future generations
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the USEPA's Proposed Greenhouse Gas Emission Standards for

Light-Duty Vehicles, which was published on September 15, 2009 (http://www.epa.gov/climatechange/endangerment.html).

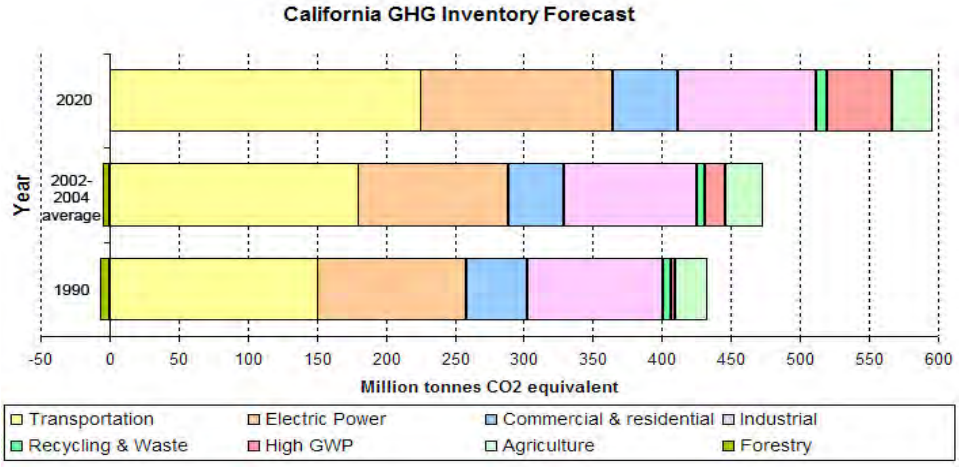
On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register (http://www.regulations.gov/search/Regs/contentStreamer?objectId=0900006480a5e7f1&disposition=attachment&contentType=pdf).

The final combined USEPA and National Highway Traffic Safety Administration standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon (MPG), if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards will cut greenhouse gas emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, ARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

**FIGURE 4-1 CALIFORNIA GREENHOUSE GAS INVENTORY**




Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: http://www.dot.ca.gov/docs/ClimateReport.pdf.

**Project Analysis**

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 mph) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure below). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors GHG emissions, particularly $CO_2$, may be reduced.

The project is proposed to be constructed as a four-lane toll facility. Three build alternatives, referred to as the Two Interchange, One Interchange, and No Interchange alternatives, are being evaluated under this process. TSM/TDM measures are currently anticipated to be incorporated into the build alternatives. The No Build Alternative is also being evaluated.

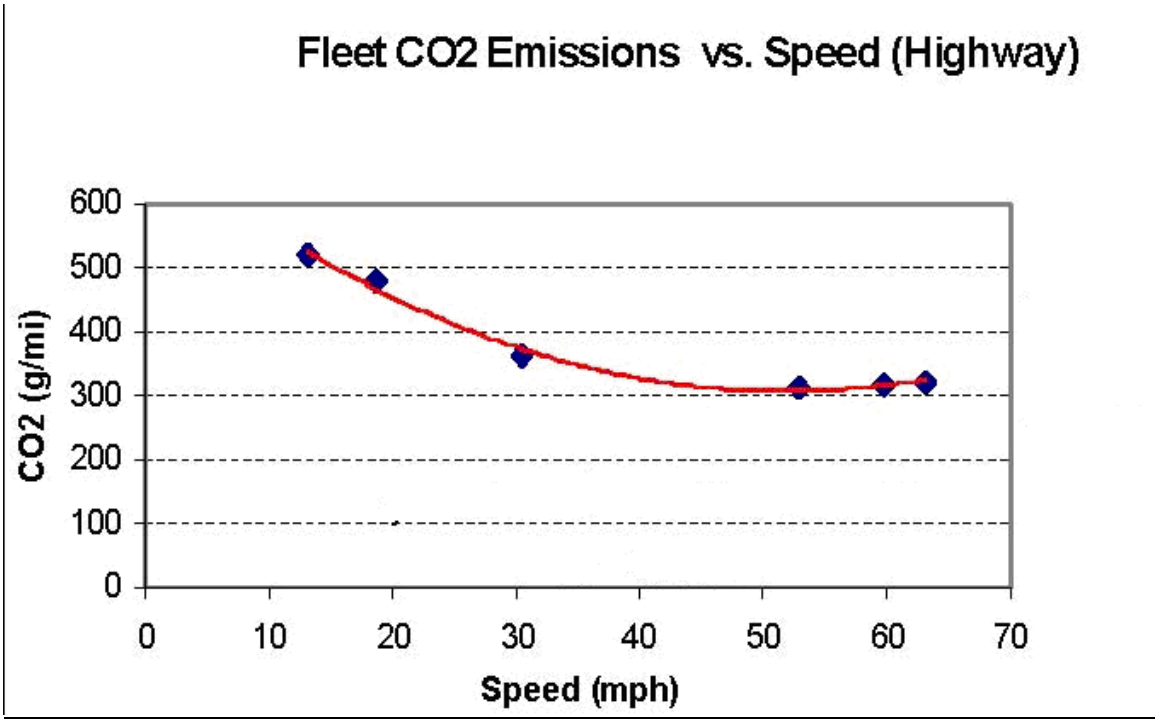
The proposed toll system is currently anticipated to include toll collection in both directions and the use of "smart technology" such as FasTrak, although additional toll-related options are still under evaluation. The proposed toll system would also include the use of variable congestion pricing at peak and non-peak hours for both commercial and passenger vehicles. This system is intended to provide a financial incentive to encourage accessing the POE during non-peak hours, thereby reducing peak hour congestion.

The proposed project is expected to increase inspection processing capacities for commercial and personal vehicles and pedestrians in the San Diego/Tijuana region, and reduce northbound vehicle and pedestrian queues and wait times to cross the border at other POEs in the region, which in turn would reduce congestion, fuel consumption and GHG emissions.

SR-11 is included in the SANDAG 2030 RTP (SANDAG 2007a); the 2008 RTIP (SANDAG 2008), which covers Fiscal Years 2009 through 2013; and the SAFETEA-LU[1] List of High Priority Projects in San Diego, which covers the five-year period ending in September 2009. A February 2011 amendment to the 2010 RTIP is expected to reflect the proposed project's modifications to SR-905 between the SR-905/SR-125/SR-11 Interchange and Britannia Boulevard, as necessary to accommodate the connection of SR-905 with SR-11.

[1] The Federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), passed in August 2005, authorizes the federal surface transportation projects for highways, highway safety and transit for the 5-year period 2005-2009.

**FIGURE 4-2**




Source: Center for Clean Air Policy— http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf

To estimate the potential beneficial or negative effects of the proposed project on San Diego regional GHG levels, EMFAC2007/BURDEN analysis performed by SANDAG and the ARB EMFAC2007 vehicle emissions model for the San Diego Air Basin were used to calculate carbon dioxide emissions for the San Diego metropolitan area with and without the proposed SR-11/Otay Mesa East POE project.

In order to determine regional GHG emissions, traffic forecasts for this study were based on the SANDAG regional transportation model. One of the inputs to the model is land use forecasts for the time periods under study. The land use forecasts used in the regional transportation model are based on City and County General Plans as well as overall forecasts of population growth and economic activity. Land use forecasts are updated periodically by SANDAG. The set of land use forecasts that were currently available during the time of study is known as the SANDAG 2030 Regional Growth Forecast Update, also known as "Series 11". Regional fuel consumption and $CO_2$ emissions were modeled with and without the build scenarios for each respective time horizon. Regional fuel consumption estimates for each of the build alternatives took into account travel along SR-11 with and without tolls. The results of the regional fuel consumption and $CO_2$ emissions models are shown in Table 4-2, below.

**Table 4-2**
**AVERAGE DIFFERENCE IN REGIONAL $CO_2$ EMISSIONS**

| Alternative | Model Year | Fuel Consumption (gal) | Efficiency Fuel Savings (gal/day) | Regional $CO_2$ Annual Avg. Emissions (tons/day) | Efficiency $CO_2$ Savings (tons/day) |
|---|---|---|---|---|---|
| No Build | 2015 | 5,469,970 | 0 | 53670 | 0 |
| Two Interchange - Toll | 2015 | 5,468,990 | 980 | 53660 | 10 |
| One Interchange - Toll | 2015 | 5,468,850 | 1,120 | 53660 | 10 |
| No Interchange - Toll | 2015 | 5,471,550 | -1,580 | 53690 | -20 |
| Two Interchange - No Toll | 2015 | 5,467,510 | 2,460 | 53650 | 20 |
| One Interchange - No Toll | 2015 | 5,468,210 | 1,760 | 53650 | 20 |
| No Interchange - No Toll | 2015 | 5,470,700 | -730 | 53680 | -10 |
| | | | | | |
| No Build | 2035 | 6,854,317 | - | 67620 | - |
| Two Interchange - Toll | 2035 | 6,849,683 | 4,633 | 67570 | 50 |
| One Interchange - Toll | 2035 | 6,846,503 | 7,813 | 67540 | 76 |
| No Interchange - Toll | 2035 | 6,858,497 | -4,180 | 67650 | -30 |
| Two Interchange - No Toll | 2035 | 6,844,817 | 9,500 | 67520 | 100 |
| One Interchange - No Toll | 2035 | 6,842,877 | 11,440 | 67500 | 11 |
| No Interchange - No Toll | 2035 | 6,856,127 | -1,810 | 67630 | -10 |

Note: EMFAC2007 model reporting limit=10 tons/day

Compared to the No Build Alternative for 2015, implementation of the Two- and One- Interchange Alternatives, with and without tolls, are estimated to reduce $CO_2$ emissions by up to 10 tons/day. The No Interchange Alternative, with and without tolls, would not provide a reduction in $CO_2$ emissions. Implementation of the Two- and One- Interchange Alternatives with and without tolls for 2035, compared to the No Build Alternative for 2035, are estimated to reduce $CO_2$ emissions by up to 100 tons/day. The No Interchange Alternative with and without tolls would not provide a reduction in $CO_2$. The decreases in $CO_2$ would be attributed to the efficiency of vehicles moving through the POE, the lack of congestion and improved travel times along the SR-11 corridor and the local street network. Despite the localized increase in traffic levels along the SR-11 corridor between opening day and the horizon year, regional transportation efficiency would be increased and overall $CO_2$ emissions would be reduced. The proposed project is consistent with Caltrans' Climate Action Program to reduce GHG emissions and to make California's transportation system more efficient.

Currently, the emissions modeling software is limited to generating output only for freeway mainlines. Therefore, the above analysis does not reflect any reduction in GHG emissions that could result from reduced queue lengths at local intersections. The potential exists for further reductions in GHG emissions from vehicles spending less time idling.

### Construction Emissions

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and

specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

**CEQA Conclusions**

While construction will result in a slight increase in GHG emissions during construction, it is anticipated that any increase in GHG emissions due to construction will be offset by the improvement in operational GHG emissions. While it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions.

**AB 32 Compliance**

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement the Governor's EOs and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $238.6 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding through 2016.[2] As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

As part of the Climate Action Program at Caltrans (December 2006, http://www.dot.ca.gov/docs/ClimateReport.pdf), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by EPA and ARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California Davis.

[2] Governor's Strategic Growth Plan, Fig. 4.2 (http://gov.ca.gov/pdf/gov/CSGP.pdf)

**FIGURE 4-3**
**OUTCOME OF STRATEGIC GROWTH PLAN**

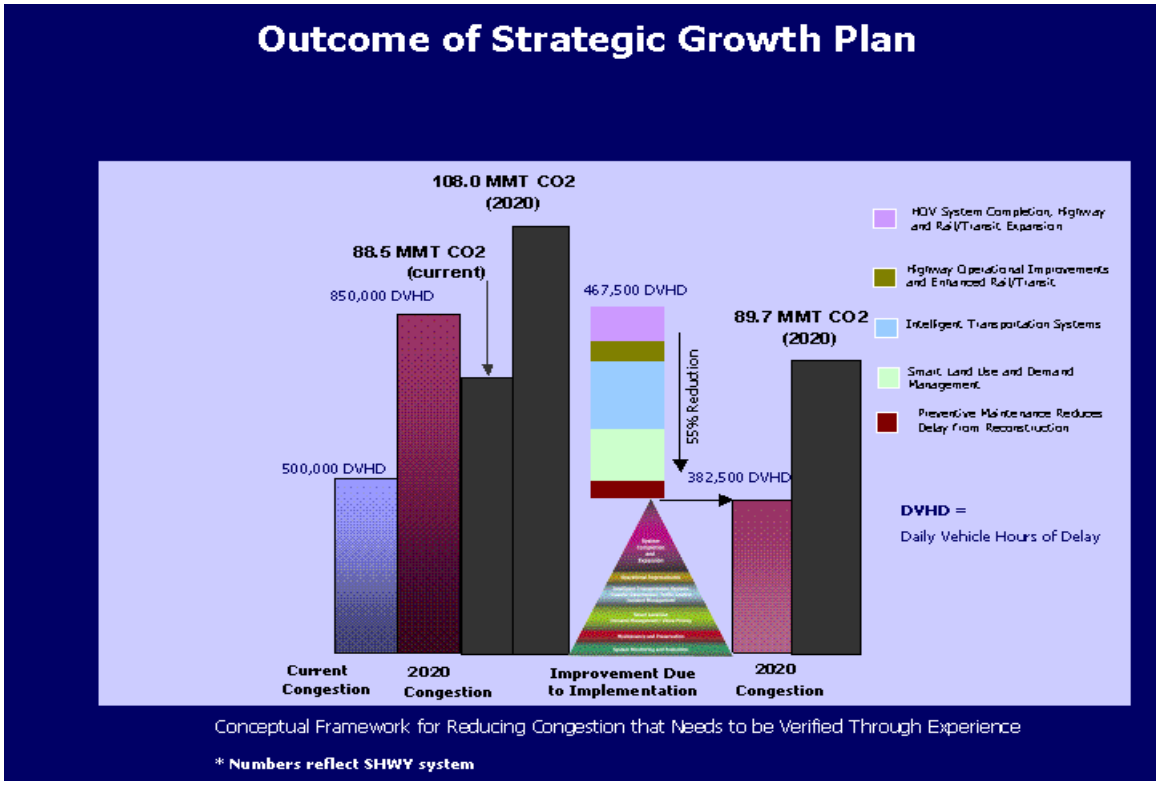



Table 4-3 summarizes the Caltrans and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006); it is available at http://www.dot.ca.gov/docs/ClimateReport.pdf

**Table 4-3**
**CLIMATE CHANGE STRATEGIES**

| Strategy | Program | Partnership | | Method/Process | Estimated $CO_2$ Savings (MMT) | |
|---|---|---|---|---|---|---|
| | | Lead | Agency | | 2010 | 2020 |
| Smart Land Use | Intergovernmental Review (IGR) | Caltrans | Local Governments | Review and seek to mitigate development proposals | Not Estimated | Not Estimated |
| | Planning Grants | Caltrans | Local and regional agencies & other stakeholders | Competitive selection process | Not Estimated | Not Estimated |
| | Regional Plans and Blueprint Planning | Regional Agencies | Caltrans | Regional plans and application process | 0.975 | 7.8 |
| Operational Improvements & ITS Deployment | Strategic Growth Plan | Caltrans | Regions | State ITS; Congestion Management Plan | .007 | 2.17 |
| Mainstream Energy & GHG into Plans and Projects | Office of Policy Analysis & Research; Division of Environmental Analysis | Interdepartmental effort | | Policy establishment, guidelines, technical assistance | Not Estimated | Not Estimated |
| Educational & Information Program | Office of Policy Analysis & Research | Interdepartmental, CalEPA, CARB, CEC | | Analytical report, data collection, publication, workshops, outreach | Not Estimated | Not Estimated |
| Fleet Greening & Fuel Diversification | Division of Equipment | Department of General Services | | Fleet Replacement<br>B20<br>B100 | 0.0045 | 0.0065<br>0.45<br>.0225 |
| Non-vehicular Conservation Measures | Energy Conservation Program | Green Action Team | | Energy Conservation Opportunities | 0.117 | .34 |
| Portland Cement | Office of Rigid Pavement | Cement and Construction Industries | | 2.5 % limestone cement mix<br>25% fly ash cement mix<br>> 50% fly ash/slag mix | 1.2<br>.36 | 3.6 |
| Goods Movement | Office of Goods Movement | Cal EPA, CARB, BT&H, MPOs | | Goods Movement Action Plan | Not Estimated | Not Estimated |
| Total | | | | | 2.72 | 18.67 |

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

Sample Mitigation Measures

- The project would plant a variety of native and drought tolerant, low maintenance trees and shrubs in ratios sufficient to replace the air quality and cooling benefits of trees removed by construction of the project. Additional trees would be planted as space allows to further increase those benefits. Trees would be planted from large size containers to accelerate reestablishment of the GHG sink and to shade the pavement. In the short term, immature tree planting would probably not offset greenhouse gas produced as a result of project construction. However, in the long term tree planting should enhance the carbon sequestration potential of the project site and GHG emission levels would, in theory, continue to improve over time as the trees became more mature, except as counteracted by increased traffic volumes

- Caltrans and the CHP are working with regional agencies to implement ITS to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system

- Caltrans is including the provision of sufficient space for a potential future transit center within the overall POE footprint for possible future development of a transit center (by others) that would accommodate buses, taxis, shuttle service, bicycles and pedestrians, thereby reducing local and cross-border personal vehicle trips

- The project would incorporate the use of energy efficient appurtenances, such as light emitting diode (LED) traffic signals and inductive sign lighting (ISL) fixtures. LED signal heads consume 10% of the electricity of traditional incandescent lights and ISL sign lighting fixtures consume less than half the power of traditional mercury vapor fixtures

- The POE is expected to be a LEED Certified facility, which is designed to be environmentally sustainable, while reducing the negative environmental impacts of buildings and improving occupant health and well-being

The following "green" practices and materials would be used, where possible, in the project as part of highway planting and erosion control work:

- PVC irrigation pipe with recycled content
- Non-chlorinated High Density Polyethylene (HDPE) irrigation crossover conduit
- Compost and soil amendments derived from sewage sludge and green waste materials
- Fiber produced from recycled pulp such as newspaper, chipboard, and cardboard
- Wood mulch made from green waste and/or clean manufactured wood or natural wood
- Native and drought tolerant plants species
- Irrigation controllers, including water conservation features and solar or battery power
- Restricted pesticide use and reduction goals

The State of California maintains several websites, which provide public information on measures to improve renewable energy use, energy efficiency, water conservation and efficiency, land use and landscape maintenance, solid waste measures, and transportation alternatives.

**Adaptation Strategies**

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels increases in storm surges and intensity, and increases in the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change.

The California Resources Agency [now the Natural Resources Agency], through the interagency Climate Action Team, was directed to coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, the Natural Resources Agency was directed to request the National Academy of Science to prepare a *Sea Level Rise Assessment Report* by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates
- the range of uncertainty in selected sea level rise projections
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems
- a discussion of future research needs regarding sea level rise for California

Furthermore EO S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the state. The Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final *Sea Level Rise Assessment Report*, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, (NOP) and/or are programmed for construction funding in the next five years (through 2013), or are routine maintenance projects as of the date of EO S-13-08 may, but are not

required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (EO S-13-08 allows some exceptions to this planning requirement.) The proposed project is scheduled to begin construction in 2012, so a sea level rise analysis would not be required.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted as part of Governor's Schwarzenegger's EO on Sea Level Rise and is mobilizing to be able to respond to the National Academy of Science report on *Sea Level Rise Assessment* which is due to be released by December 2010.

On August 3, 2009, Natural Resources Agency in cooperation and partnership with multiple state agencies released the 2009 California Climate Adaptation Strategy Discussion Draft, which summarizes the best known science on climate change impacts in seven specific sectors and provides recommendations on how to manage against those threats. The release of the draft document set in motion a 45-day public comment period. Led by the California Natural Resources Agency, numerous other state agencies were involved in the creation of discussion draft document, including EPA; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The discussion draft focuses on sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The strategy is in direct response to Gov. Schwarzenegger's November 2008 EO S-13-08 that specifically asked the Natural Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings. A revised version of the report was posted on the Natural Resource Agency website on December 2, 2009; it can be viewed at: http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

## 4.8 MITIGATION MEASURES FOR SIGNIFICANT IMPACTS UNDER CEQA

Supporting documentation of all CEQA resource evaluation is provided in Chapter 3 of this Draft EIR/EIS. Discussion of all impacts avoidance, minimization and/or compensation measures is under the appropriate topic headings in Chapter 3. Implementation of these measures would reduce significant impacts to below a level of significance under CEQA for paleontological and biological resources. Significant impacts to traffic and visual resources would remain significant and unmitigable.

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# Chapter 5
# Comments and Coordination

# CHAPTER 5.0 – COMMENTS AND COORDINATION

## 5.1 INTRODUCTION

Early and continuing coordination with the appropriate public agencies and the general public is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings; interagency coordination meetings; Native American coordination; community group, planning group and sponsor group presentations; and the public scoping meeting. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination. Evidence of coordination and public involvement can be seen in the figures at the end of the chapter.

## 5.2 PHASE I PEIR/PEIS COMMENTS AND COORDINATION SUMMARY

The Phase I program EIR/EIS process involved coordination with public agencies and the general public that is similar to the Tier II project. Refer to Chapter 6.0, *Comments and Coordination*, of the Phase I PEIR/PEIS for a detailed discussion of this process and figures evidencing public involvement and coordination.

### 5.2.1 Notice of Intent/Notice of Preparation

Pursuant to NEPA and CEQA, a Notice of Intent (NOI) and NOP were prepared for the program. The NOI was published in the Federal Register on May 2, 2007. Comment letters were received from USFWS and the EPA. The NOP was issued by the State Clearinghouse on May 11, 2007, and the review was completed on June 11, 2007. Comments on the NOP were received from the Native American Heritage Commission, IBWC, CHP, CDFG, Otay Crossings Commerce Park, and the County Department of Planning and Land Use (DPLU).

### 5.2.2 Public Meetings

Two public meetings were held at the Ocean View Hills Elementary School in Otay Mesa to involve the community in the scoping and review processes. A Public Scoping Meeting was held on Wednesday, June 6, 2007 from 5 PM to 7:30 PM to give the community an opportunity to review and comment on the proposed SR-11/POE program. On Wednesday, February 20, 2008 from 5 PM to 7:30 PM, a Public Meeting was held to give the community an opportunity to review and comment on the Draft PEIR/PEIS. Both meetings were conducted in an "Open House" format, with representatives of Caltrans and SANDAG in attendance to answer questions and receive comments. Notices were mailed to the cooperating/participating agencies, state, federal and local agencies, Mexican agencies with an interest in the program, elected officials and members of the public. The Notice of Public Meeting for the scoping meeting was published in the San Diego Union Tribune in English and the Hispanos Unidos newspaper in Spanish and in the San Diego Union Tribune in English and Spanish for the public meeting for the Draft PEIR/PEIS. A Spanish interpreter was available to translate for Spanish-speaking attendees. Comments were encouraged at the meetings, and comment sheets were made available. The East Otay Mesa Property Owners Association (EOMPOA) commented after the scoping meeting. Public review of the draft PEIR/PEIS included four comments at the public meeting and 21 letters during the comment period.

### 5.2.3 Additional Program Outreach

Additional program outreach included ongoing Otay Mesa East Interagency Workgroup meetings; a presentation by the Caltrans Project Management Team to the Otay Mesa Chamber of Commerce; ongoing Border Liaison Mechanism meetings of the Technical Committee on Otay Mesa East – Mesa de Otay; program updates presented by Caltrans to the County, the Border Governors Conference and the U.S./Mexico Joint Working Committee; periodic program status updates to the East Otay Mesa Property Owners Association; and ongoing meetings of the Border Transportation Committee.

### 5.2.4 SAFETEA-LU 6002 Coordination Plan

On August 10, 2005, President Bush signed SAFETEA-LU into law. SAFETEA-LU promotes more efficient and effective federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility for solving transportation problems in their communities. Section 6002 of SAFETEA-LU established a new environmental review process that included a Coordination Plan, which requires Caltrans to enhance opportunities for coordination with federal, state, Tribal, and local government agencies, as well as the public, during the environmental review process for the program. As part of the Coordination Plan, prepared in June 2007, Caltrans was tasked with managing the 6002 process, preparing the EIS, and providing opportunities for public and Participating and Cooperating Agency involvement. Compliance with the latter was accomplished in various ways, which are discussed below.

#### Initiation of Agency Participation

Pursuant to 23 USC 139 Section 6002 of SAFETEA-LU, letters inviting federal, state, Tribal and local government agencies that may have an interest in program development as a Coordinating or Participating Agency were mailed on July 9, 2007 by FHWA and June 27, 2007 by Caltrans. Letters were sent to the following federal, state, Tribal and local agencies:

- Cooperating Agencies: GSA, DOS, USACE, USFWS, DHS, CBP, CEQ, EPA, CDFG, CHP, and RWQCB

- Participating Agencies: USFWS; CBP; EPA; DHS; CHP; CDFG; RWQCB; SDAPCD; SANDAG; County; City; OWD; IBWC; Native American Heritage Commission; USDA, Animal and Plant Health Inspection Services; FDA; California Governor's D.C. Office, Port Security Unit; Sycuan Band of the Kumeyaay Nation; Kumeyaay Cultural Heritage Preservation; Jamul Indian Village; Kumeyaay Cultural Repatriation Committee; Diegueno/Kumeyaay Representative; San Pasqual Band of Mission Indians; Ewiiaapaayp Tribal Office; Santa Ysabel Band of Diegueno Indians; Mesa Grande Band of Mission Indians; Manzanita Band of the Kumeyaay Nation; Viejas Band of Mission Indians; Kwaaymii Laguna Band of Mission Indians; Inaja Band of Mission Indians; and Santa Ysabel Band of Diegueno Indians

In response to the request letters, GSA, DOS, USACE, USFWS, EPA, and CBP agreed to be both Cooperating and Participating Agencies. The SDAPCD, City of San Diego, SANDAG, IBWC and OWD agreed to be Participating Agencies.

#### Opportunities for Involvement

Participating agencies and the public were provided the opportunity for input into the purpose and need and the range of alternatives. Letters and electronic mail were sent to Participating Agencies for review and comments on the program Purpose and Need Statement in July/August 2007. Comments were

received from the following Participating Agencies: DHS, EPA, IBWC, USFWS, and SANDAG. FHWA also submitted comments. The public was provided the opportunity for input into the purpose and need for the proposed program via the NOI/NOP, the Public Scoping Meeting, the mass-mailed scoping meeting information flyer, the newspaper advertisements, and additional outreach meetings. Letters and electronic mail were sent to Participating Agencies for review and comments on the program alternatives in July/August 2007. Comments were received from the following Participating Agencies: DHS, EPA, IBWC, USFWS, and SANDAG. The EOMPOA was the only member of the public to comment on this issue. All comments were addressed in the Final PEIR/PEIS.

**Project Development Team Meetings**

The SR-11/Otay Mesa East POE PDT was assembled by Caltrans in 2006 to serve as the technical advisory committee and internal decision-making body for the program. The PDT consists of Caltrans' staff representatives from Program Management and the various technical divisions, including Environmental, Design, Maintenance, Hydraulics, and other divisions. The meetings are also attended by FHWA, SANDAG, GSA, DHS and the City and County of San Diego. The PDT has generally met monthly during the course of program development, as issues have arisen requiring technical direction or resolution.

## 5.3 TIER II COMMENTS AND COORDINATION

### 5.3.1 Notice of Intent/Notice of Preparation

Pursuant to NEPA and CEQA, an NOI and NOP were prepared for the project. The NOI was published in the Federal Register on November 5, 2008**.** The NOP was received by the State Clearinghouse on November 7, 2008 and the review was completed on December 8, 2008. These notices are included at the end of this section. Comments were received on the NOI and NOP from USFWS, the City, the County, SD Commercial, LLC, and FEMA. These comment letters are also included at the end of this section.

### 5.3.2 Public Scoping Meeting

A Public Scoping Meeting was held on Thursday, December 4, 2008 from 5 PM to 7:30 PM at the Ocean View Hills Elementary School in Otay Mesa to give the community an opportunity to review and comment on the proposed project. Notices were mailed to the cooperating/participating agencies, state, federal and local agencies, Mexican agencies with an interest in the program, elected officials and members of the public. The Notice of Public Meeting was published in the South County Edition of the Union Tribune on November 20, 2008 in both English and Spanish editions. A Spanish interpreter was available to translate for Spanish-speaking attendees. The Public Scoping Meeting was attended by twenty-two people. Comments were encouraged at the meeting, and one oral comment was made by Ruben Barrales from the San Diego region Chamber of Commerce. In addition, comment sheets were made available; however, no written comments were received.

### 5.3.3 Additional Project Outreach

Additional outreach has included project updates presented by Caltrans and coordination with the organizations described in Table 5-1, below. Additional outreach and coordination has also been achieved through numerous group and individual meetings with property owners, contact with local government groups on both sides of the international border, and communication with elected officials.

In order to meet the overall project objectives, various committees and groups have been established to allow for successful communication regarding the project to occur on both the U.S. and the Mexico sides. Table 5-1 depicts major committees and/or groups on both sides of the border.

**Table 5-1**
**PROJECT COORDINATION GROUPS AND ORGANIZATIONS**

| Location | Meeting Group | Purpose | Frequency |
|---|---|---|---|
| SANDAG | SANDAG Borders Committee | Provides oversight for planning activities that impact the borders of the San Diego region (Orange, Riverside and Imperial Counties, and the Republic of Mexico) as well as government-to-government relations with Tribal nations in San Diego County. The preparation and implementation of SANDAG Binational, Interregional, and Tribal Liaison Planning programs are included under this purview. It advises the SANDAG Board of Directors on major interregional planning policy-level matters. Recommendations of the Committee are forwarded to the Board of Directors for action. | 4th Friday of each month 12:30 p.m. to 2:30 p.m. |
| SANDAG | Committee on Binational Regional Opportunities | The Committee on Binational Regional Opportunities advises SANDAG's Borders Committee concerning both short- and long-term binational related activities, issues and actions; provides recommendations regarding Binational border-related planning and development; and identifies ways to assist and coordinate with existing efforts in the Binational area. The membership consists of elected officials and staff representatives of academia, business, community organizations, and the Mexican government. | Monthly |
| Caltrans District 11 | Project Development Team | Provides technical services for the development of the project plans and specifications that ultimately lead to the construction of the project. Attendees include the County, City, GSA, FHWA, DHS and Caltrans. | Monthly |
| SANDAG | East Otay Mesa Interagency Work Group | Focuses only on the U.S. side of the border. | Bi-monthly |
| Caltrans District 11 | Binational Otay Mesa East Policy Strategy Group | Binational committee to coordinate schedules, access points and technical data for each POE. Attendees include Caltrans, FHWA, SCT, the Mexican Secretariat of Foreign Relations (SRE) and SANDAG. | Bi-annually |
| Tijuana-San Diego | Border Liaison Mechanism Technical Commission | Binational committee to share project updates and discuss project issues. This is a formalized binational group that includes state departments from both U.S. and Mexico. Attendees are Caltrans, FHWA, SCT, SRE and SANDAG. | Bi-annually |
| Different locations (Alternate U.S. and Mexico) | Joint Working Committee | Binational group whose primary focus is to cooperate on land transportation planning and the facilitation of efficient, safe and economical cross-border transportation movements. The group is comprised of transportation professionals from the Mexican SCT and the FHWA.<br><br>The members of the Joint Working Committee are representatives of SCT, FHWA, Mexican Secretariat of Foreign Relations, DOS, the four U.S. State Departments of Transportation and the six Mexican border states. GSA, CBP, the Institute of Administration and Estimates of National Real Estate, the General Customs Administration, and the Secretariat of Environmental and natural Resources also participate. | Bi-annual |

**Table 5-1 (cont.)**
**PROJECT COORDINATION GROUPS AND ORGANIZATIONS**

| Location | Meeting Group | Purpose | Frequency |
|---|---|---|---|
| Mexican Secretariat of Foreign Relations | Bridges and Border Crossings Intersecretariat Group | Mexican group whose primary focus is to cooperate on border crossings. Head of representatives of the Mexican Secretariat of Foreign Relations. In addition to Secretariat of Foreign Relations (SRE), the members are: SCT, General Customs Administration, Secretariat of Economy, National Immigration Institute, Secretariat of Environment and Natural Resources, Secretariat of Social Development, International Boundary and Water Commission, Institute of Administration and Estimates of National Real Estate. The representatives of the six Mexican border states also participate in the meetings. | NA |
| Different Locations (Alternate Mexico and U.S.) | Binational (U.S. and Mexico) International Borders and Bridges Group | Since 2008, the binational group established three meetings per year (two regional and one plenary) alternating U.S. and Mexico locations.<br><br>The political will of both countries to invest on border infrastructure, international bridges and border crossings is the result of the excellent terms and negotiation skills of the members of this group.<br><br>This is the institutional group who represents U.S. and Mexico and is responsible for bilateral agreements on border infrastructure. Headed by the Mexican Secretariat of Foreign Relations and the DOS. | Three times a year; two regional meetings and one plenary |
| NA | East Otay Mesa Property Owners' Association | Attendees include local property owners, Caltrans, and SANDAG. | NA |
| NA | Otay Mesa Chamber of Commerce, Transportation Subcommittee | Provides for updates on projects within the Otay Mesa area. Attendees include Caltrans and the Otay Mesa Chamber of Commerce | Monthly |

Source: SANDAG/Caltrans (2009)

### 5.3.4 SAFETEA-LU 6002 Coordination Plan

As noted above, Section 6002 of SAFETEA-LU established a new environmental review process that included a Coordination Plan, which requires Caltrans to enhance opportunities for coordination with federal, state, Tribal, and local government agencies, as well as the public, during the environmental review process for the program. As part of the Coordination Plan, Caltrans was tasked with managing the 6002 process, preparing the EIS, and providing opportunities for public and Participating and Cooperating Agency involvement.

#### Coordination Plan

Pursuant to 23 USC 139 Section 6002 of SAFETEA-LU, Caltrans prepared a Coordination Plan (November 2008) including a list of agencies, roles and responsibilities for the project, agency contact information, coordination points, information requirements, and a project schedule. The Coordination Plan was updated regularly throughout the development of the project.

### Initiation of Agency Participation

Pursuant to 23 USC 139 Section 6002 of SAFETEA-LU, letters inviting federal, state, Tribal and local government agencies that may have an interest in development of the project as a Coordinating or Participating Agency were mailed to the following federal, state, and local agencies in November 2008:

- Cooperating Agencies: GSA, DOS, USACE, DHS, CBP, EPA, IBWC

- Participating Agencies: GSA, DOS, USFWS; CBP; EPA; DHS; USACE; CDFG; RWQCB; SANDAG; County of San Diego; City of San Diego; DGS; International Boundary and Water Commission; California Public Utilities Commission

In response to the request letters, GSA, DOS, DHS, CBP, and EPA agreed to be both Cooperating and Participating Agencies. The USACE noted they are a Cooperating Agency. The USFWS, CDFG, SANDAG, County of San Diego, City of San Diego, DGS, IBWC, and the California Public Utilities Commission agreed to be Participating Agencies.

As listed in Section 5.2.4, the Phase I coordination plan included Tribal representatives from the Sycuan Band of the Kumeyaay Nation; the Kumeyaay Cultural Heritage Preservation; the Jamul Indian Village; the Kumeyaay Cultural Repatriation Committee; the Diegueno/Kumeyaay; the San Pasqual Band of Mission Indians; the Ewiiaapaayp Tribal Office; the Santa Ysabel Band of Diegueno Indians; the Mesa Grande Band of Mission Indians; the Manzanita Band of the Kumeyaay Nation; the Viejas Band of Mission Indians; the Kwaaymii Laguna Band of Mission Indians; the Inaja Band of Mission Indians; and the Santa Ysabel Band of Diegueno Indians. Tribal representatives did not respond to the Participating Agency Invitation for the Tier II environmental document process and were therefore not included in the Tier II Coordination Plan.

### Opportunities for Involvement

Considerable coordination has occurred with the cooperating and participating agencies throughout the Tier II environmental review process. The agencies were formally or informally contacted and consulted during the preparation of the environmental analysis. Participating agencies and the public were provided the opportunity for input into the Tier II purpose and need and the range of alternatives. Letters and electronic mail were sent to Participating Agencies for review and comments on the project Purpose and Need Statement and Project Alternatives in September 2009. Comments were received from the following Participating Agencies: EPA, IBWC, GSA, CBP, USACE. USFWS, DGS, SANDAG, the County and the City; these are included at the end of this section. In addition, FHWA and Caltrans have worked closely with representatives of these agencies through ongoing meetings of the PDT, East Otay Mesa Interagency Work Group, and other groups listed in Table 5-1, which have continued to meet throughout the course of project development in Tier II, as issues have arisen requiring technical direction or resolution.

As in Phase I, the public was provided the opportunity for input into the purpose and need for the proposed project via the NOI/NOP, the Public Scoping Meeting, the mass-mailed scoping meeting information flyer, newspaper advertisements, and additional outreach meetings. All comments have been addressed in this Draft EIR/EIS.

NOI published in Federal Register



file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro/shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Room, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing will also be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File No. SR–NYSEArca–2008–117 and should be submitted on or before November 26, 2008.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[7]

**Florence E. Harmon,**

*Acting Secretary.*

[FR Doc. E8–26345 Filed 11–4–08; 8:45 am]

**BILLING CODE 8011–01–P**

[7] 17 CFR 200.30–3(a)(12).

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### Public Notice for Waiver of Aeronautical Land-Use Assurance; Kenosha Regional Airport, Kenosha, WI

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Notice of intent of waiver with respect to land.

**SUMMARY:** The Federal Aviation Administration (FAA) is considering a proposal to authorize the release of 1.38 acres of the airport property at the Kenosha Regional Airport, Kenosha, WI. The Wisconsin Department of Transportation (WisDOT) is seeking airport property to improve the intersection of Interstate 94 and State Trunk Highway 158. The WisDOT issued an environmental Finding of No Significant Impact on September 11, 1996.

The acreage being released is not needed for aeronautical use as currently identified on the Airport Layout Plan. The acreage comprising this parcel 24 and 24A were originally acquired under Grant Nos. AIP–01–1984 and AIP–02–1985. The City of Kenosha (Wisconsin), as airport owner, has concluded that the subject airport land is not needed for expansion of airport facilities. There are no impacts to the airport by allowing the airport to dispose of the property. The airport will receive the appraised fair market value of $89,700 for the land. Approval does not constitute a commitment by the FAA to financially assist in the disposal of the subject airport property nor a determination of eligibility for grant-in-aid funding from the FAA. The disposition of proceeds from the disposal of the airport property will be in accordance with FAA's Policy and Procedures Concerning the Use of Airport Revenue, published in the **Federal Register** on February 16, 1999.

In accordance with section 47107(h) of title 49, United States Code, this notice is required to be published in the **Federal Register** 30 days before modifying the land-use assurance that requires the property to be used for an aeronautical purpose.

**DATES:** Comments must be received on or before December 5, 2008.

**ADDRESSES:** Ms. Sandra E. DePottey, Program Manager, Federal Aviation Administration, Airports District Office, 6020 28th Avenue South, Room 102, Minneapolis, MN 55450–2706. Telephone Number (612) 713–4350/FAX Number (612) 713–4364. Documents reflecting this FAA action may be reviewed at this same location or at the Wisconsin Department of Transportation, 4802 Sheboygan Ave., Room 701, Madison, WI 53707.

**FOR FURTHER INFORMATION CONTACT:** Ms. Sandra E. DePottey, Program Manager, Federal Aviation Administration, Airports District Office, 6020 28th Avenue South, Room 102, Minneapolis, MN 55450–2706. Telephone Number (612) 713–4350/FAX Number (612) 713–4364. Documents reflecting this FAA action may be reviewed at this same location or at the Wisconsin Department of Transportation, 4802 Sheboygan Ave., Room 701, Madison, WI 53707.

**SUPPLEMENTARY INFORMATION:** Following is a legal description of the subject airport property to be released at Kenosha Regional Airport in Kenosha, Wisconsin and described as follows:

A parcel of land located in Southwest ¼ of the Northwest ¼ of Section 31, T02N, R22E, Town of Somers, Kenosha County, WI.

Said parcel subject to all easements, restrictions, and reservations of record.

Issued in Minneapolis, MN, on August 5, 2008.

**Robert A. Huber,**

*Manager, Minneapolis Airports District Office, FAA, Great Lakes Region.*

[FR Doc. E8–26407 Filed 11–4–08; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

### Federal Highway Administration

### Tier II Environmental Impact Statement: San Diego County, CA

**AGENCY:** Federal Highway Administration (FHWA), DOT.

**ACTION:** Notice of Intent.

**SUMMARY:** The FHWA, on behalf of the California Department of Transportation (Caltrans) and the General Services Administration (GSA) is issuing this notice to advise the public that an Environmental Impact Statement (EIS) will be prepared for Tier II of a proposed highway project, international port of entry (POE), and possible Commercial Vehicle Enforcement Facility (CVEF) in the East Otay Mesa area of San Diego County, California.

**FOR FURTHER INFORMATION CONTACT:** Cesar Perez, Senior Transportation Engineer, Federal Highway Administration, 650 Capitol Mall, Suite 4–100, Sacramento, CA 95814, *Telephone:* (916) 498–5065, or Susanne Glasgow, Deputy District Director, Environmental Division, California Department of Transportation, District 11, 4050 Taylor Street, MS–242, San Diego, CA 92110, Telephone: (619) 688–0100.

**SUPPLEMENTARY INFORMATION:** The FHWA, in cooperation with the California Department of Transportation (Caltrans), has previously completed a Phase I EIS (Record of Decision dated October 3, 2008) that resulted in the selection of a preferred corridor for State Route 11 (SR–11) and a preferred location for the Otay Mesa POE. Issuance by the U.S. Department of State (DOS) of a conditional Presidential Permit is also an anticipated outcome of this prior environmental process.

At this time, the FHWA, the GSA, and Caltrans will prepare a Tier II EIS that will evaluate design and operational alternatives for future SR–11, the POE, and a potential CVEF, in the previously selected locations in the Otay Mesa area of San Diego County in southern California. This will provide the required environmental documentation for a full Presidential Permit for the POE and allow FHWA/Caltrans and GSA to proceed with acquisition of right-of-way and construction of SR–11 and the Otay Mesa East POE, respectively.



Future SR–11 would begin at approximately the SR–905/SR–125 interchange and proceed easterly approximately 2.1 miles to a new, approximately 100-acre POE. The project will also either determine a route to the existing CVEF that serves the existing Otay Mesa POE to the west or will provide a second CVEF (approximately 20 acres) dedicated to the proposed Otay Mesa East POE. Within the limits of and adjacent to the study area, there are biological resources, planned land uses, paleontological resources, cross-border concerns, and potential traffic management, air quality, and growth issues.

Preliminary Alternatives/Design Variations under consideration include: (1) Taking no action; (2) the option to achieve the project's purpose and need through accommodation of pedestrians, cyclists, transit, and other transportation systems/demand management measures alone, without implementation of SR–11 and the new POE; (3) SR–11 toll implementation options; (4) the options of building two interchanges between SR–11 and local roadways, or one interchange only, with the exact locations of the interchanges to be determined after consideration of public input; and (5) the options of utilizing the existing CVEF at the existing Otay Mesa POE to also serve the proposed Otay Mesa East POE versus construction of a new CVEF adjacent to the new POE. For all alternatives/design variations, transportation systems/demand management measures and options to reduce vehicle idling time, and associated air pollutant emissions at the POE will be analyzed.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, and Local agencies; Native American organizations; private organizations; and citizens who have previously expressed or are known to have interest in this proposal.

During future project development, prior to draft EIS circulation, a public scoping meeting will be held on December 4, 2008, from 5 p.m. to 7:30 p.m. at Ocean View Hills Elementary School, located at 4919 Del Sol Boulevard, San Diego, California. In addition, a public hearing will be held after publication of the draft EIS. Public notices will be given regarding the time and place of the meeting and hearing.

To ensure that the full range of issues relating to this proposed action is addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the Draft EIS/EIR should be directed to FHWA and/or Caltrans at the addresses provided above.

Issued on: October 30, 2008.

**Nancy Bobb,**

*Director, State Programs, Federal Highway Administration, Sacramento, California.*

[FR Doc. E8–26365 Filed 11–4–08; 8:45 am]

**BILLING CODE 4910–22–P**

## DEPARTMENT OF TRANSPORTATION

### Federal Transit Administration

**[Docket No. FTA–2008–0048]**

### Notice of Buy America Waiver Request by the Regional Transportation Commission of Southern Nevada for Bus Rapid Transit Rolling Stock

**AGENCY:** Federal Transit Administration (FTA), DOT.

**ACTION:** Notice of Buy America waiver request and request for comments.

**SUMMARY:** The Regional Transportation Commission of Southern Nevada (RTC) has asked the Federal Transit Administration (FTA) to waive its Buy America requirements to permit it to purchase Bus Rapid Transit Vehicles from Wright Group (Wright) to be designed and manufactured in the United Kingdom. This request comes after the RTC awarded a contract to Wright but before the award of an FTA grant to the RTC. The RTC has asked for a waiver on the dual bases of public interest and non-availability. FTA seeks public comment on whether it should grant RTC's request on the basis of non-availability only. This Notice sets forth the RTC's arguments for a non-availability waiver and seeks comment.

**DATES:** Comments must be received by November 12, 2008. Late-filed comments will be considered to the extent practicable.

**ADDRESSES:** Please submit your comments by one of the following means, identifying your submissions by docket number FTA–2008–0048. All electronic submissions must be made to the U.S. Government electronic site at *www.regulations.gov*. Commenters should follow the instructions below for mailed and hand-delivered comments.

(1) *Web site: www.regulations.gov.* Follow the instructions for submitting comments on the U.S. Government electronic docket site;

(2) *Fax:* (202) 493–2251;

(3) *Mail:* U.S. Department of Transportation, 1200 New Jersey Avenue, SE., Docket Operations, M–30, Room W12–140, Washington, DC 20590–0001.

(4) *Hand Delivery:* Room W12–140 on the first floor of the West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*Instructions:* All submissions must make reference to the ''Federal Transit Administration'' and include docket number FTA–2008–0048. Due to security procedures in effect since October 2001, mail received through the U.S. Postal Service may be subject to delays. Parties making submissions responsive to this notice should consider using an express mail firm to ensure the prompt filing of any submissions not filed electronically or by hand. Note that all submissions received, including any personal information therein, will be posted without change or alteration to *www.regulations.gov*. For more information, you may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477), or visit *www.regulations.gov*.

**FOR FURTHER INFORMATION CONTACT:** For questions please contact Jayme L. Blakesley at (202) 366–0304 or *jayme.blakesley@dot.gov*.

**SUPPLEMENTARY INFORMATION:** The purpose of this notice is to seek public comment on whether the Federal Transit Administration should waive its Buy America requirements in 49 CFR Part 661 for fifty (50) Bus Rapid Transit vehicles to be manufactured and assembled in the United Kingdom by Wright Group (Wright) for the Regional Transportation Commission of Southern Nevada (RTC). Because the RTC has already awarded a contract to Wright, it has asked for a post-award waiver.

In its request for a waiver, a copy of which has been placed in the Docket, Nevada RTC describes the benefits ''of introducing and operating visually attractive, advanced technology, high capacity vehicles.'' The RTC states that it ''has largely foregone more expensive light rail, heavy rail, or monorail alternatives.'' As an example, Nevada RTC stated that it ''converted its Downtown Connector Project into a [Bus Rapid Transit] Project, at a

NOP Recorded by the County Recorder

FILED
Gregory J. Smith, Recorder/County Clerk
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NOTICE OF PREPARATION

To: All
Federal, State, and Local
Responsible and Cooperating Agencies

From: California Department of
Transportation (CALTRANS)
District 11
4050 Taylor Street, MS-242
San Diego, CA 92110

Subject: Notice of Preparation of a Draft Environmental Impact Report
[References: Division 13, Public Resources Code, Section 21080.4 (State);
40 C.F.R. 1501.7 and 1508.22 (Federal)]

This is to inform you that the California Department of Transportation (Caltrans), in cooperation with the Federal Highway Administration (FHWA) and the General Services Administration (GSA), will be the lead agency and will prepare a Draft Tier II Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the project described below. Your participation is requested in the preparation and review of this document.

We need to know the applicable permit and environmental review requirements of your agency and the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project proposes to evaluate design and operational alternatives for future State Route 11 (SR-11), the Otay Mesa East Port of Entry (POE), and a potential Commercial Vehicle Enforcement Facility (CVEF) in previously selected locations on Otay Mesa in San Diego County. FHWA, in cooperation with the California Department of Transportation (Caltrans), has previously completed a Program EIR/Phase I EIS (Notice of Determination dated October 3, 2008) that resulted in the selection of a preferred corridor for SR-11 and a preferred location for the POE. Issuance by the U.S. Department of State (DOS) of a conditional Presidential Permit is also an anticipated outcome of this prior environmental process. The current Tier II EIR/EIS will provide the required environmental documentation for a full Presidential Permit for the POE, and allow FHWA/Caltrans and GSA to proceed with acquisition of right-of-way and construction of SR-11 and the Otay Mesa East POE, respectively.

Future SR-11 would begin at approximately the SR-905/SR-125 interchange and proceed easterly approximately 2.1 miles to a new, approximately 100-acre POE. The project also will either determine a route to the existing CVEF that serves the existing Otay Mesa POE to the west, or will provide a second CVEF (approximately 20 acres) dedicated to the proposed Otay Mesa East POE.

Within the limits of and adjacent to the study area, there are biological resources, planned land uses, paleontological resources, cross-border concerns, and potential traffic management, air quality, and growth issues.

Preliminary Alternatives/Design Variations under consideration include: (1) taking no action; (2) the option to achieve the project's purpose and need through accommodation of pedestrians, cyclists, transit, and other transportation systems/demand management measures alone, without implementation of SR-11 and the new POE; (3) SR-11 toll implementation options; (4) the options of building two interchanges between SR-11 and local roadways, or one interchange only, with the exact locations of the interchanges to be determined after consideration of public input; and (5) the options of utilizing the existing Commercial Vehicle Enforcement Facility (CVEF) at the existing Otay Mesa POE to also serve the proposed Otay Mesa East POE, versus construction of a new CVEF adjacent to the new POE. For all alternatives/design variations, options to reduce vehicle idling time and associated air pollutant emissions at the POE, and transportation systems/demand management measures will be analyzed.

A public scoping meeting will be held on December 4, 2008, from 5:00 PM to 7:30 PM at Ocean View Hills Elementary School, located at 4919 Del Sol Boulevard, San Diego, California. There will be a formal public hearing at the conclusion of environmental studies. Public notice will be given as to the date, location, and time of the public meeting and the hearing.

To encourage an exchange of information and ideas, the meeting format will be an informal open forum. Interested persons will be able to drop in at any time during the meeting hours to ask questions, make suggestions, or express views for determining the range of alternatives and the scope of the issues to be addressed and analyzed in depth in the Draft EIR/EIS.

Subsequent to this initial scoping meeting, individual scoping meetings will be arranged with responsible/cooperating agencies and with special interest groups upon request.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 45 days after receipt of this notice.

Please send your response and direct any comments or questions regarding this project to Susanne Glasgow, Deputy District Director, Environmental Division, Caltrans District 11, 4050 Taylor Street, MS-242, San Diego, CA 92110.

3 November 2008
Date

Susanne Glasgow
Deputy District Director
Environmental Division

# USFWS NOI Comment Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

DEC 08 2008

In Reply Refer To:
FWS-SDG-08B0316-09FA0005

Cesar Perez
Senior Transportation Engineer
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, California 95814

Subject: Notice of Intent to prepare a Tier II Environmental Impact Statement for State Route 11, Otay Mesa East Port of Entry, and a potential Commercial Vehicle Enforcement Facility in San Diego County, California (ER 08/1139)

Dear Mr. Perez:

We have reviewed the Notice of Intent (NOI) for State Route 11 (SR 11), a New Port of Entry (POE), and a potential Commercial Vehicle Enforcement Facility (CVEF) on east Otay Mesa in San Diego County and are providing the following comments. The project proposes to evaluate design and operational alternatives for future SR 11, the POE and a potential CVEF on Otay Mesa, California. We offer the following comments and recommendations regarding project-associated biological impacts based on our review of the NOI and our knowledge of declining habitat types and species within our office jurisdiction in San Diego County.

We have been participating in the stakeholders group that has been established for this project and will continue to do so. We commented previously on this project in a letter dated June 4, 2007, in response to the NOI for the Phase I Environmental Impact Statement (EIS) as well as in a letter dated March 4, 2008 on the draft EIS. As we stated in our previous letters, of primary concern is the potential impacts to the sensitive resources on both side of the border on Otay Mesa including potential impacts to Quino checkerspot butterflies (*Euphydras editha quino*), burrowing owls (*Speotyto cunicularia hypugaea*) and listed vernal pool species. We recommend that the POE be located as far to the west as possible in order to minimize impacts to these resources. In addition, we recommend that advanced mitigation opportunities be explored on Otay Mesa for this project given the rarity of the resources and to ensure that adequate mitigation can be secured. Otay Mesa is a critical component of the County of San Diego's Multiple Species Conservation Program, that supports species and habitats not found anywhere else.

To facilitate the evaluation of the proposed project from the standpoint of fish and wildlife protection, we request that the EIS contain the following specific information:

TAKE PRIDE IN AMERICA



1. A description of the environment in the vicinity of the project from a local and regional perspective. This description should include a vegetation/habitat map of the project area and surrounding areas.

2. A complete discussion of the purpose and need for the project and each of its alternatives. This discussion should also include how this project will be coordinated with the San Diego County update of their East Otay Mesa Specific Plan and its associated amendment to the Multiple Species Conservation Program.

3. A complete description of the proposed project, including the limits of the project area. This project description should include all practicable alternatives that have been considered to avoid and minimize project impacts, to the maximum extent practicable, to sensitive habitats (*e.g.*, coastal sage scrub, wetlands) and endangered, threatened, or sensitive species, and measures to mitigate unavoidable impacts.

4. Quantitative and qualitative assessments of the biological resources and habitat types that will be impacted by the proposed project and its alternatives. An assessment of direct, indirect, and cumulative project impacts to fish and wildlife associated habitats of the project (*e.g.*, increased population, increased development, and increased traffic). All facets of the project (*e.g.*, construction, implementation, operation, and maintenance) should be included in this assessment.

5. This assessment should include a list of Federal candidate, proposed, and/or listed species; State-listed species; and locally sensitive species that are on or near the project site, including a detailed discussion of these species and information pertaining to their local status and distribution. Therefore, we recommend comprehensive biological surveys be performed on the project site, including directed surveys for all potentially occurring Federal and State-listed species using standard survey protocols. Investigators conducting surveys for federally listed species must be qualified biologists. We are particularly interested in any and all information and data pertaining to potential impacts to populations of federally listed or proposed species and their designated or proposed critical habitats. The EIS should disclose all impacts to these sensitive resources including those incurred from indirect impacts.

6. Project-related impacts that may occur to federally listed species in Mexico should also be addressed.

7. Project-related impacts may occur outside of the area directly affected by the proposed project. We recommend that you make your cumulative impacts analysis broad enough to include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the area affected by the direct and indirect effects of your project.

USFWS NOI Comment Letter



8. Proposed measures to be taken to avoid, minimize, and mitigate significant impacts to biological resources should be discussed in detail.

9. Maps and tables summarizing specific acreages and locations of all habitat types and the number and distribution of all Federal candidates, proposed, and/or listed species; State listed species; and locally sensitive species on or near the project site that may be affected by the proposed project or project alternatives.

10. A detailed analysis of impacts of the proposed project on the movement of wildlife, and proposed measures to avoid and minimize impacts, and mitigate unavoidable impacts.

11. An assessment of potential impacts to wetlands and jurisdictional waters of the United States. The EIS should disclose all impacts to jurisdictional waters and wetlands, and proposed measures to be taken to avoid and minimize impacts, and mitigate unavoidable impacts.

12. Identification of methods to be employed to prevent the discharge and disposal of toxic and/or caustic substances, including oil and gasoline, on the project site during and after construction. Specifically, effects to water quality from runoff should be addressed.

13. A discussion assessing the effects of the proposed project on multi-species planning efforts within the Multiple Species Conservation Program.

We appreciate the opportunity to comment on this NOI with regard to potential impacts to sensitive and endangered species, wildlife, and wetlands. If you have any questions pertaining to these comments, please contact Ms. Susan Wynn of my staff at (760) 431-9440.

Sincerely,

For Karen A. Goebel
Assistant Field Supervisor

cc:
Susanne Glasgow, Caltrans District 11
Vijai Rai, DOI

# City of San Diego NOI Comment Letter

THE CITY OF SAN DIEGO

December 17, 2008

Susanne Glasgow
Department of Transportation
District 11
4050 Taylor Street, MS-242
San Diego, CA 92110

Dear Ms. Glasgow:

Subject: **Notice of Preparation of Draft Environmental Impact Report - State Route 11/Otay Mesa East Port of Entry Project**

The City of San Diego ("City") has received and reviewed the Notice of Preparation of a Draft Tier II Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for future State Route 11 (SR-11), the Otay Mesa East Port of Entry (POE), and a potential Commercial Vehicle Enforcement Facility (CVEF) with the California Department of Transportation (Caltrans) acting as the lead agency in cooperation with the Federal Highway Administration (FHWA) and the General Services Administration (GSA). In response to the NOP, the City has identified additional environmental issues beyond those listed in the NOP, which may have an effect on the City of San Diego that require review and analysis. These include transportation/circulation, cultural resources, and aesthetics/visual quality. In addition, we have identified applicable permit and environmental review requirements for those areas of the proposed project outside of the Caltrans right-of-way, and within the City's jurisdiction. While this is not an exhaustive list of the required permits, there is a potential for the implementation of the project to necessitate a Site Development Permit, Planned Development Permit, Public Right-of-Way Permit, easement vacations, street vacations, and associated environmental review. The EIR prepared by your agency will be used when considering permit approval and environmental review for this project.

The City has agreed to be a participating agency in the development of the EIR/EIS for the project. We look forward to continued coordinated planning between the City, Caltrans and the other participating agencies in addressing impacts from the implementation of this important transportation project.

Please contact me if you have any questions regarding this response, please do not hesitate to contact me at (619)446-5008.

DIVERSITY

**Development Services**
1222 First Avenue, MS 501 • San Diego, CA 92101-4155
Tel (619) 446-5460



Please contact me if you have any questions regarding this response, please do not hesitate to contact me at (619)446-5008.

Sincerely,

Cecilia Gallardo, AICP
Assistant Deputy Director
Development Services Department

cc: Labib Qasem, Senior Traffic Engineer
Myra Herrmann, Senior Planner
City of San Diego Environmental Review & Comment Files

# County of San Diego NOI Comment Letter


County of San Diego

DEPARTMENT OF PUBLIC WORKS

JOHN L. SNYDER
DIRECTOR

5555 OVERLAND AVE, SUITE 2188
SAN DIEGO, CALIFORNIA 92123-1295
(858) 694-2212 FAX: (858) 268-0461
Web Site: www.sdcounty.ca.gov/dpw/


December 18, 2008

Cesar Perez
Senior Transportation Engineer
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Dear Mr. Perez:

NOTICE OF INTENT FOR STATE ROUTE 11 / PORT OF ENTRY / COMMERCIAL VEHICLE ENFORCEMENT FACILITY - TIER II ENVIRONMENTAL IMPACT STATEMENT

The County of San Diego has reviewed the Notice of Intent (NOI) for the preparation of an Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) for the Tier II State Route 11 (SR-11) highway project, international Port of Entry (POE), and Commercial Vehicle Enforcement Facility (CVEF), issued on October 30, 2008.

County Department of Public Works (DPW) and Department of Planning and Land Use (DPLU) staff have completed their review of the NOI. The comments below are regarding traffic and transportation.

SR-11

1. The EIS/EIR should provide a detailed project description that clearly identifies all of the proposed design/operation features for each project alternative.

2. The EIS/EIR should analyze existing conditions, on opening day for the proposed project, and year 2035, with and without the project. Tier II analysis should consider post-year 2035 build-out/full development forecast projections in developing the ultimate freeway design. The County and City of San Diego should be consulted when determining the build-out potential of future development planned for the Otay Mesa region to determine ultimate right of way (ROW) and design requirements for SR-11.





3. We encourage continued agency coordination and sharing of data for the development of the traffic analysis.

4. The EIS/EIR should provide a discussion of the project's impacts to local County roads under each of the build-out interchange alternatives.

5. Interim/phased alternatives should also be considered that will maintain access to properties within East Otay Mesa. One such alternative would be provision of an expressway with direct access at Enrico Fermi Road and Siempre Viva Road.

6. The impact of out-of-direction travel to local roadways, in both the unincorporated area and the City of San Diego, should be accounted for in alternatives with limited or no direct access/interchanges to SR-11.

7. The Modified Two-Interchange alternative identified in the Value Analysis Study should be fully assessed and considered in the Tier II EIS/EIR.

8. The EIS/EIR analysis should consider existing interchange spacing and non-standard design issues that were approved for SR-905 and SR-125 when evaluating interchange alternatives for SR-11.

9. The EIS/EIR should verify that the proposed SR-11 project would not preclude the construction of any planned County Circulation Element and Specific Plan roads. The SR-11 design should accommodate all planned County Circulation Element and Specific Plan roads that are proposed to directly connect with and/or traverse SR-11.

10. The EIS/EIR should discuss whether the proposed SR-11 project may require improvements to connecting County roads and/or reconfiguration of County roads. The extent of improvements that may be required to connect and/or parallel County roads should also be discussed.

11. Property owners in the East Otay Mesa Specific Planning area have expressed needs and interest in additional access to the County mesa area in the vicinity of the SR-905/SR-11/SR-125 freeway-to-freeway interchange. Propery owners have proposed auxiliary ramps. The EIS/EIR should evaluate and consider additional access alternatives, where feasible, in final design of the freeway-to-freeway interchange. A potential option would be an off-ramp that splits off from the northbound to eastbound SR-905/SR-11 connector, then drops down to connect with the southern terminus of Harvest Road. SR-905 northbound access to Otay Mesa Road should also be considered due to benefit the SR-11/SR-905 connection and access to the East Otay Mesa area.

# County of San Diego NOI Comment Letter



12. The County's Guidelines for the Determination of Significance for Transportation and Traffic, adopted September 26, 2006, and revised December 5, 2007, should be used as a guide in preparation of the traffic analysis for impacts to County roads.

13. The EIS/EIR should note encroachment and construction permits would be required for any work performed within the County's ROW.

14. The EIS/EIR should provide a project description that clearly identifies all of the proposed tolling alternatives for SR-11, such as the potential tolling at all of the SR-11 access points and/or tolling at the new POE only.

New Otay Mesa East POE

15. The new Otay Mesa East POE will require an estimated 100 acres for its facilities. The EIS/EIR should identify properties that potentially may be directly impacted by the 100-acre project site.

16. The EIS/EIR should outline the potential process that may be used to acquire the needed 100 acres.

17. The EIS/EIR should provide a detailed project description that clearly identifies all of the proposed POE operational alternatives, such as various passenger and commercial/cargo options, plus the new POE functioning as a toll facility.

18. The EIS/EIR should explain how proposed operations at the new POE would relate to operations at the existing Otay Mesa and San Ysidro POEs.

Commercial Vehicle Enforcement Facility (CVEF)

19. The EIS/EIR should provide map figures that show proposed routes from the new POE to the CVEF, and onto SR-11 or other public roads.

20. The EIS/EIR should identify/assess if truck traffic, especially international commercial trucks, would need to use any County roads to travel from the new POE to the CVEF, and onto SR-11.

**PLANNING AND LAND USE**

21. The proposed highway, POE and possible CVEF will be on land within the jurisdiction of the County of San Diego. The County is part of the Multiple



Species Conservation Program (MSCP) and has adopted a sub-area plan (South County Plan) that covers southern San Diego County, including EOM. Tier II EIS/EIR should evaluate a design that minimizes the impacts to the various species that are covered by the MSCP and that inhabit the non-native grasslands and coastal sage scrub within the chosen alignment for SR-11, the chosen location of the POE, and the possible CVEF. The covered species that occur within the proposed project area and its vicinity include:

- Northern harrier (breeding and foraging in non-native grasslands)
- Swainson's hawk (foraging during winter in non-native grasslands)
- Ferruginous hawk (foraging in non-native grasslands)
- Golden eagle (foraging in non-native grasslands) – a pair of golden eagles is known to nest in O'Neal Canyon to the east of the proposed project, and they forage over grasslands on EOM.
- Burrowing owl (burrows, breeding and foraging in non-native grasslands)
- Coastal cactus wren (breeding and foraging in cactus patches)
- California gnatcatcher (breeding and foraging in coastal sage scrub)
- California rufous-crowned sparrow (breeding and foraging in coastal sage scrub
- Mountain lion (foraging)

22. Burrowing owls are of particular concern on EOM. Burrowing owls have declined in San Diego County by about 90% during the past 30 years. At the end of the 1970s and in the early 1980s there were 250-300 breeding pairs, with very few on EOM. Now there are only 40-50 breeding pairs in all of San Diego County, with 25-30 of these pairs on EOM. The proposed SR-11, POE and possible CVEF will impact non-native grassland habitat and possibly burrows. The Tier II EIS should evaluate a design that minimizes impacts to the burrowing owl and its non-native grassland habitat.

23. The County of San Diego, U.S. Fish and Wildlife Service and California Department of Fish and Game have identified two burrowing owl nodes for preserving non-native grassland on EOM. The attached map shows the two burrowing owl nodes (pink circles): one just west of Donovan State Detention Facility along the north side of EOM and one at the very southeastern corner of the mesa. Much of the land in the northern node is already preserved by the County and Caltrans and includes the Caltrans restoration site for SR-125. Other portions are being purchased by other developers needing mitigation on East Otay Mesa. In the southeastern node, none of the land has been designated for preservation yet. The County encourages Caltrans and the Department of General Services to consider preservation of lands in these areas as mitigation for impacts to non-native grasslands and possibly coastal sage scrub by the proposed project.

# County of San Diego NOI Comment Letter



24. The County is concerned about access from SR-11 to commercial and industrial lands on East Otay Mesa. These land uses are important to traffic coming north from Mexico and include loading and unloading facilities, truck parking and container storage, and other necessities of international commerce. The County requests that Caltrans contact the Department of Planning and Land Use and the Department of Public Works to coordinate the location of interchanges on SR-11 that will provide access to East Otay Mesa.

The County of San Diego appreciates the opportunity to participate in the development and environmental review process for this project, and close coordination and partnership in the planning and development of the SR-11/POE/CVEF project. We look forward to receiving future meeting correspondence, environmental documents and/or providing additional assistance at your request related to this project. If you have any questions regarding these comments, please contact Richard Chin, Associate Transportation Specialist at (858) 874-4203.

Sincerely,

JOHN L. SNYDER, Director
Department of Public Works

JLS:DKT:le

cc: Susanne Glasgow, Deputy District Director, Environmental Division, Caltrans – California Department of Transportation, 4050 Taylor Street, San Diego, CA 92110
Kelly Finn, Caltrans – Caltrans, 4050 Taylor Street, San Diego, CA 92110
Richard Chin, Michael Robinson, Bob Goralka, Francisco "Nick" Ortiz – Department of Public Works
Bobbie Stephenson, Leann Carmichael, Tom Oberbauer, Bob Citrano – Department of Planning and Land Use

SD Commercial, LLC NOI Comment Letter

# SD Commercial, LLC

December 31, 2008

Ms. Kelly Finn
Environmental Branch Chief, Environmental Division
Caltrans District 11
4050 Taylor Street, M.S. 242
San Diego, CA 92110

**RE: Comments for SR-11 and Otay Mesa East POE**

Dear Ms. Finn,

We are in receipt of your Notice of Preparation of a Draft Tier II Environmental Impact Report regarding the construction of SR-11 and the Otay Mesa East Port of Entry ("OMEPOE"). The following entities own approximately 2,200 acres of land near the proposed facilities, some of which is located in the proposed corridor. These entities are controlled by the De La Fuente family and are managed by SD Commercial, LLC.

American International Racing, Inc.
D&D Landholdings
International Industrial Park, Inc.
KYDDLF & RDLFG FT NO 1, LLC
Otay Mesa Property, L.P.
OMC Properties, LLC
Rancho Vista Del Mar
TPO LLC
Otay International LLC
R.K.R. DLFY L.P.
OWDP LLC
Otay Truck Parking L.P.
Otay Concrete Parking, LLC
Otay Acquisitions, L.P.

5440 Morehouse Drive, Suite 4000 • San Diego, CA 92121 • 858/623-9000 • 858/623-9009 fax



As such, this correspondence represents the comments of the aforementioned entities, which were requested to be submitted by December 31, 2008.

We are happy to hear that Caltrans has obtained the conditional Presidential Permit, as we are in favor of SR-11 and the commerce and circulation it has the potential to achieve. However, we do have multiple concerns outlined below that need to be addressed in order to realize the full benefits of these facilities, as they were originally intended.

**Funding –**

It is our understanding from attending multiple meetings with Caltrans officials that the total construction costs are projected to be around $700 million, comprised of approximately $350 million for SR-11 itself and $350 million for the actual OMEPOE. Additionally, since the passing of Senate Bill 1486, SANDAG is authorized to issue bonds, collect tolls and utilize other tools to repay approximately $350 million of these expenses. Unfortunately, we have been informed that Caltrans has "negotiated away" any assistance from the Federal government in order to expedite the issuance of the Presidential Permit. This funding would have assisted in closing the gap for the remaining money needed to complete the full construction, as planned.

This decision makes no logical sense. Why would we bargain with these desperately needed funds? In light of the current budget crisis in California, which has resulted in a cessation of work on State Route 905, the opportunity for Federal funds is an integral part of any expansion of the national highway grid. Not only will the additional OMEPOE alleviate the congestion at the existing POEs, therefore significantly lessoning the current efforts required, but it will also increase the security at the border and create hundreds of jobs in our currently downsized economy. We know that traditionally the Federal government will contribute funds for these types of endeavors, as they do at other POEs around the country. This opportunity should be opened up for renegotiation.

**Interchanges –**

Caltrans' recent notion to consider the elimination of one or both of the planned interchanges at Enrico Fermi Drive ("Enrico") and Siempre Viva Road ("Siempre") is simply unacceptable. As far back as 1994, the East Otay Mesa Specific Plan designated these two interchanges as a critical part of the local circulation element. When the County Board of Supervisors adopted the Amended Subarea 1 Plan on August 1, 2007, these two interchanges formed the backbone of the East Otay Mesa road network. We strongly urge Caltrans and SANDAG to respect the decision of the local planning authority in this regard. All development occurring since the adoption of this plan has been forced to comply accordingly. As such, a deviation of this magnitude would

# SD Commercial, LLC NOI Comment Letter



essentially throw away years of planning and considerable dollars and undermine the whole reason for creating a community plan in the first place. We ask that Caltrans recognize that projects have been planned and approved around the layout of this element. Not having on/off ramps to the surrounding land would be like having a house with no doors.

**Alternatives –**

If after exploring all of the available funding mechanisms (including Federal government funding), Caltrans is unable to respect East Otay Mesa's Circulation Element by furnishing the planned two full freeway diamonds, there are a few potential untapped resources in the area that may be able to lend assistance. As Caltrans is aware, R.J. Donovan Prison ("Donovan") is preparing to expand its facilities to house 1,500 additional medical beds, along with approximately 1,600 permanent staff. These figures do not include visitors, inmate and patient transporters, suppliers, probation officers, attorneys, and the multitude of construction workers whose presence will be ongoing through project completion. It is easy to picture the magnitude of traffic that will be generated from this project alone.

As such, this expansion project could justify the costs of building the western half of the interchange at Enrico. This one-half diamond would benefit Donovan directly, as the traffic going to and from the prison could immediately access SR-11, instead of further congesting the surface streets. We have proposed this mitigation measure to Donovan, along with the northward extension of Enrico from Otay Mesa Road, at public hearings and in our comment letter. This extension would act as Donovan's primary access and would mitigate the safety hazard created by only one point of ingress/egress to a project of this volume. If Caltrans supported our efforts to compel Donovan to incorporate these two mitigation measures, this would achieve funding for one-half of the Enrico interchange. Once this is accomplished, Caltrans' funding needs are reduced to an interchange at the eastern half of Enrico and a full interchange at Siempre. If no other funding method is feasible, we would entertain the compromise of deferring the eastern half of the diamond at Enrico.

Another issue that has been alluded to at multiple meetings with Caltrans officials is the possible design flaw of the proximity of the proposed interchange at Siempre to the OMEPOE facility. Apparently, this issue has arisen due to the footprint expansion from the originally planned facility. If during the further investigation of these relative distances, the originally proposed alignments are deemed impracticable, we would consider a half diamond at Siempre and a half diamond at Alta Road.



**CHP Truck Inspection Station –**

During Caltrans' recent presentations, we have been informed that the CHP Truck Inspection Station ("CHP") is proposed to be located on approximately 20 acres immediately outside the northeast corner of the OMEPOE anticipated footprint. This revised location is detrimental for us because it will block access to our properties located to the east of the OMEPOE. As such, we would suggest situating the CHP immediately east of the footprint, as opposed to its current northeasterly position.

**Biology –**

We have reviewed the Biological Environment report presented in the August 2008 Final Program Environmental Impact Report/Phase I Environmental Impact Statement and we disagree with the biological findings. Specifically, we vehemently oppose the inclusion of the alleged findings relating to our properties (APN 648-080-16 and APN 648-080-17) which lie outside the Tier II Environmental Study Area. In addition, we contest the premature findings on APN 648-080-18, which has yet to even be studied. Our letter of authorization dated August 15, 2008 provided only limited access to approximately 11 acres of that parcel. Even though we strongly voice our disagreement, we do not intend to delay the project based on the biological reports, but would like to notify Caltrans of our total opposition for including these findings in a public document.

We look forward to working with Caltrans to reach mutually agreeable decisions on these issues, while respecting the region's transportation needs.

Sincerely,

David Wick
President
SD Commercial, LLC
(858) 623-9000, ext. 700
dwick@natent.com

cc: Mark Baza
Mario Orso
Sandra Lavender
Nicola Bernard

# FEMA NOI Comment Letter

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

December 8, 2008

Kelly Finn
Environmental Branch Chief
Environmental Division
Caltrans District 11
4050 Taylor Street, MS 242
San Diego, California 92110

Dear Ms. Finn:

This is in response to your request for comments on the Notice of Preparation/Notice of Scoping for the Otay Mesa East Port of Entry (POE), and potential Commercial Vehicle Enforcement Facility (CVEF).

Please review the current effective Flood Insurance Rate Maps (FIRMs) for the County of San Diego (Community Number 060284), Map revised September 29, 2006. Please note that the County of San Diego, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.





- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

**Please Note:**

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The County of San Diego floodplain manager can be reached by calling Cid Tesoro, Floodplain Administrator, at (858) 694-2666.

If you have any questions or concerns, please do not hesitate to call Marshall Marik of the Mitigation staff at (510) 627-7057.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Cid Tesoro, Floodplain Administrator, San Diego County
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern District
Marshall Marik, Floodplanner, CFM, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

# EPA Comment Letter on Purpose and Need/Alternatives

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

OCT 30 2009

Susanne Glasgow
Caltrans District 11
4050 Taylor Street, M.S. 242
San Diego, CA 92110

Subject: Comments on Purpose and Need and Range of Alternatives for Tier II State Route 11 / Otay Mesa East Port of Entry Project

Dear Ms. Glasgow:

This letter responds to your September 30, 2009 request for comments on the Purpose and Need and Project Alternatives for the State Route (SR) 11 Otay Mesa East Port of Entry (POE) Project, San Diego County, California. Federal Highway Administration (FHWA), in cooperation with California Department of Transportation (Caltrans), will prepare a Tier II Draft Environmental Impact Statement (DEIS) for the project under National Environmental Policy Act (NEPA). A Program Phase 1 Environmental Impact Statement (PEIS) has already been completed. The request is in accordance with Section 6002 of Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

EPA is a Participating (as defined in SAFETEA-LU) and Cooperating Agency (as defined in the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1508.5)) for this project and has participated in several interagency workgroup meetings. EPA previously provided comments on the project following our review of the Notice of Intent (NOI) for the project published in the Federal Register (November 2008). EPA appreciates the opportunity to review the project's Purpose and Need and Range of Alternatives.

**Purpose and Need**

*Transit and Bicycle Access*

The Draft Purpose and Need Statement includes an additional objective to allow bicycle and transit access to the proposed POE (p. 2). The proposal is to accommodate possible future transit service, such as Bus Rapid Transit (BRT), by including sufficient space within the overall POE footprint for a potential future transit center, without siting, designing, or constructing the facility at this time, which will be defined by San Diego Association of Governments and Metropolitan Transit Service at a later date (p. 1). While EPA is very supportive of bicycle and transit access as a strategy to reduce local and cross-border personal vehicle trips, the need statement should include information that describes the current condition related to bicycle and transit trips to and from POEs in the region and how the project would support current and/or proposed biking / transit initiatives in the border region.

*1998 Letter of Intent Binational Corridor Preservation for State Route 11*

Another additional objective is to support the 1998 Letter of Intent entitled "Binational Corridor Preservation for State Route 11 – Tijuana/Rosarito 2000 and Site Designation for the East Otay Mesa-Mesa de Otay II Port of Entry". However, the Draft Purpose and Need Statement does not include any information on the Letter of Intent. EPA recommends providing background information on the Letter of Intent in the Purpose and Need Statement to clarify how supporting binational corridor preservation and the goals and objective outlined in the Letter of Intent will be met. EPA also recommends adding "where feasible and in compliance with Federal and State regulations" to the end of this objective.

*Connections to Local Roads from SR 11*

The current focus of the Draft Purpose and Need Statement related to the SR 11 facility is linking the proposed POE to the existing and proposed highway system for binational regional mobility. The need to connect SR 11 to local traffic circulation (proposed and/or existing) is not discussed. Considering that the primary difference between the build alternatives is the number of proposed interchanges (Two Interchange Alternative, One Interchange Alternative, and No Interchange Alternative), the Purpose and Need Statement should define the relationship of the SR 11 intersections to local roads to better understand how the number of interchanges are related to the purpose and need for the proposed project. EPA recommends including trip origination and destination information as supporting information to inform the need for the project. In addition, the purpose and need statement should identify who would use these intersections. Specifically identify if these interchanges would service existing roads or proposed roads.

*Volume and Capacity Needs of the Proposed SR 11 and POE Facilities*

The Draft Purpose and Need Statement provides information that supports the need for a new border crossing and connecting highway, but supporting volume and capacity information is lacking. This information is critical in informing the alternatives related to size and operation for the new infrastructure. Based on information provided, it appears the existing border crossings are inadequate to accommodate the present and future cross-border traffic, even with proposed improvements at existing facilities. Therefore, the description of the need for the project should be revised to include estimated traffic volumes (including other modes of cross-border trips), estimated capacity requirements at the new border crossing, and projected additional highway infrastructure for both present and future conditions. This information will help justify and characterize the type, extent and magnitude of infrastructure needed to reduce existing border crossing congestion and accommodate the future travel demand.

The Draft Project Alternatives document only proposes a four-lane freeway and does not include smaller or larger facilities within the range of alternatives. The lack of inclusion of fewer or larger facilities (fewer or additional lanes) in the range of alternatives proposed for analysis is not explained in the Project Alternatives discussion, nor supported by any information in the Purpose and Need Statement. We recommend revising the discussion of the Project Alternatives to either include a broader range of alternatives, or identify why only a four-lane structure is proposed. In addition, data that is being considered to determine adequate sizing and operational requirements for this POE should be included in the needs statement to justify the scope of the POE facility in the Project Alternatives.

# EPA Comment Letter on Purpose and Need/Alternatives

*Increased U.S. Southbound Inspections and Northbound Mexico Inspections*

EPA is aware of the anticipated increased and likely regular southbound vehicular inspections by the U.S. Customs and Border Protection (CBP) that would occur as part of the enhanced security operations at border facilities in the region. EPA is also aware that Mexico will begin the screening of inbound vehicles using the Sistema de Aforo Vehicular (SIAVE) system. Page 3 of the Draft Project Alternatives indicates that although sufficient space has been provided within the proposed POE site to accommodate future southbound inspections and conceptual facilities are identified, detailed design for such facilities cannot be developed until specific requirements become known. EPA recommends incorporating in the Purpose and Need Statement the most current and available information about CBP's proposal to increase southbound vehicular inspections and discussing how implementation of Mexico's screening of inbound vehicles will integrate with the anticipated southbound inspections by the U.S. government at the Tijuana border.

**Project Alternatives**

*Relationship to Preferred Program Alternative Identified in the Phase I PEIS*

The Draft Purpose and Need Statement indicates that both the Tier II POE shape and layout have been adjusted from those in the Phase I PEIS to reflect subsequent design changes for the proposed SR 11 corridor and the POE facility (p. 2). Consequently, the footprint for the alternatives is larger than the selected preferred program alternative (e.g., 109.3 acres versus 100 acres for the POE site) and the POE footprint has edged eastward. EPA recommends including additional rationale for the design changes and indicating whether the increase in size and shifting of the POE boundary eastward changes any analysis or conclusion related to environmental impacts assessed in the Phase I PEIS.

*Additional Elements of the SR 11 Facility*

The Draft Project Alternatives document includes information pertaining to project and right of way footprint, medians, interchanges, crossings for local roads, and number of lanes, but does not include any information for other road elements, such as stormwater-related infrastructure and possible crossings (e.g., culverts, bridges, etc.) for natural features (drainages, wildlife crossings, etc.). This is particularly important when considering whether the proposed freeway will avoid or minimize impacts to waters of the U.S. and other sensitive habitats. EPA recommends describing other roadway elements in the Project Alternatives that will be incorporated into the project design to avoid and minimize impacts to water quality and sensitive biological resources.

The drawings for all of the build alternatives appear to include an interchange at Siempre Viva Road, even though it is not labeled as such in the One Interchange Alternative (Figure 2) and No Interchange Alternative (Figure 3) drawings. The text for the One Interchange Alternative and the No Interchange Alternative describes an undercrossing at Siempre Viva Road (p.4). The text also further states that several design elements of the Siempre Viva Road undercrossing would be similar to the Siempre Viva Road Interchange proposed under the Two Interchange Alternative, with the principal difference that no direct access would be provided between SR 11 and Siempre Viva Road. This is confusing since the graphic appears to be exactly



the same for all of the figures at Siempre Viva Road. Please further explain the similar design features and why the figure looks the same for an interchange versus an undercrossing at Siempre Viva Road and/or clarify if this is an error in Figures 2 and 3.

*Lack of Details on the POE Facility*

Considering that this is a project-level EIS, design information on the proposed POE facility is extremely limited in the Draft Project Alternatives description. The text in the Draft indicates the proposed footprint is based on design and operational assumptions (p. 3). Buildings and inspection areas are not labeled in the figures, nor described in the Alternatives. The number of booths and lanes is not provided, and operational requirements are not described. The Phase I PEIS included labeling for its conceptual design / layout (Figure 2-3 of the Phase 1 PEIS) that the Draft Project Alternatives does not include. The Final Phase I PEIS indicates that the conceptual design for the new POE was developed using a software simulation tool called Border Wizard Program and that further design details would be developed in Phase II (p.2-4 of Final PEIS), but these are not described in the Draft Project Alternatives document. EPA recommends including a further developed POE design and description in the Project Alternatives.

*Screening Alternatives*

EPA would like to receive more information on the Range of Alternatives in order to provide more meaningful feedback. EPA also recommends providing the methodology used for screening the alternatives to determine which Range of Alternatives will be included in the DEIS to Participating and Cooperating Agencies for comments. The methodology should include information about which criteria and measures were, or will be, used at each screening level and how they will be integrated in a comprehensive evaluation so that meaningful feedback can be provided on the screening process.

*Least Environmentally Damaging and Practicable Alternative*

There is a likely need for a Department of the Army permit for discharge of fill in waters of the U.S. for the Project. This will require documentation that a reasonable range of alternatives were analyzed to identify the Least Environmentally Damaging and Practicable Alternative (LEDPA) in order to comply with Clean Water Act (CWA) Section 404(b)(1) Guidelines. The 404(b)(1) Guidelines require non-water dependent projects that discharge dredged or fill material into special aquatic sites (e.g., wetlands) to rebut the presumptions that there are alternatives available to the applicant which do not involve impacts to special aquatic sites and that alternatives which do not involve special aquatic sites are less damaging to the aquatic ecosystem. To rebut these presumptions, the project proponent is usually required to examine both off-site and on-site alternatives, which are interrelated to the project purpose statement. EPA recommends including a discussion on the requirements of LEDPA selection and possible adoption of the EIS by the U.S. Army Corps of Engineers for their permit decision in the Project Alternatives and describing how the alternative analysis will comply with the 404(b)(1) Guidelines.

EPA Comment Letter on Purpose and Need/Alternatives

**Section 6002 Coordination for Future Projects**

Section 6002 SAFETEA-LU requires that the lead agency provide an opportunity for involvement by Participating Agencies in defining the Purpose and Need and in determining the Range of Alternatives for a project as early as practicable during the environmental review process. For this project, EPA received a concurrent request to comment on Purpose and Need and Range of Alternatives. The intent of Section 6002 SAFETEA-LU is to involve Participating Agencies early during the development of Purpose and Need in order to inform the scope and development of Project Alternatives. For future projects, EPA recommends that Caltrans request Participating Agency feedback on the Purpose and Need before extensive effort is expended on developing a Range of Alternatives so that agency input can help shape alternative development. EPA also recommends requesting Participating Agency feedback on the project's coordination plan, particularly if a project schedule is developed that includes timelines for Participating Agency comments.

As a next step for this project and as described in Section 6002 SAFETEA-LU, EPA is available to assist in the determination of the methodologies to be used and the level of detail required in the analysis of each alternative for the project. We are also available to continue working with the interagency workgroup to further refine the Project Alternatives to avoid and minimize impacts to resources.

Thank you for requesting our comments on the Purpose and Need and Project Alternatives. We look forward to continued participation in this project as a Participating and Cooperating Agency through the interagency workgroup and the Section 6002 SAFETEA-LU process. Please contact Susan Sturges within the EPA's Environmental Review Office (415-947-4188 or sturges.susan@epa.gov) and Dave Fege within EPA's Border Office (619-235-4769 or fege.dave@epa.gov) for further coordination on this project.

Sincerely,

Ann McPherson
for

Connell Dunning, Transportation Team Supervisor
Environmental Review Office
Communities and Ecosystems Division

CC: Pedro Orso-Delgado, Caltrans
Steve Healow, Federal Highway Administration
Ramon Riesgo, General Services Administration
Michelle Mattson, U.S. Army Corps of Engineers
Susan Wynn, U.S. Fish and Wildlife Service
Andy Brinton, U.S. Customs and Border Protection
Ted Boling, Council of Environmental Quality
James Gavin, U.S. Environmental Protection Agency

5

# IBWC Comment Letter on Purpose and Need/Alternatives

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

October 15, 2009

Susanne Glasgow
Deputy District Director, Environmental
Department of Transportation
4050 Taylor Street, MS-242
San Diego, CA 92110

Re: Review and Comment on the Purpose and Need, and Range of Alternatives for the State Route 11/Otay Mesa East Port of Entry Project.

Dear Ms. Glasgow:

In reference to your letter dated September 30, 2009, The United States International Boundary and Water Commission (USIBWC) has reviewed the above referenced document. We do not currently have any comments for the purpose and need statements and look forward to reviewing future works in the project.

Of great importance to the USIBWC is for this project to address stormwater controls to prevent pollutants and higher than normal flows of stormwater runoff into the Tijuana River system. Also, one of the mandates of the USIBWC is delineation of the boundary between the United States and Mexico. We would like to have coordination with our survey team to insure proper marking of the border.

If you have any questions or comments, please feel free to contact me at (915) 832-4749 or Mr. Carlos Peña at (915) 832-4740.

Sincerely,

for Jose L. Merino

John Merino
Principal Engineer
USIBWC Engineering Department

The Commons, Building C, Suite 310 • 4171 N. Mesa Street • El Paso, Texas 79902
(915) 832-4100 • (FAX) (915) 832-4190 • http://www.ibwc.state.gov

# GSA Comment Letter on Purpose and Need/Alternatives

October 29, 2009

Ms. Suanne Glasgow
Caltrans – District 11
4050 Taylor Street, MS-242
San Diego, CA 92110

RE: Comments on the Purpose and Need, and Range of Alternatives for the State Route 11/Otay Mesa East Port of Entry Project

Dear Ms. Glasgow,

GSA has reviewed the Purpose and Need, and Range of Alternatives for the State Route 11/Otay Mesa East Port of Entry Project, as part of the Draft Environmental Impact Report/Tier II Environmental Impact Statement (Draft EIS/EIR), San Diego County, California, pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508).

GSA is a "Participating Agency" (as defined in 23 USC Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)) and a "Cooperating Agency" (as defined in the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1508.5).

Based on our review, GSA has the following comments:

**SAFETEA-LU 6002 Coordination Plan – State Route 11 and Otay Mesa East Land Port of Entry – Tier II**

p. 2

| | |
|---|---|
| Agency: | **U.S.** General Services Administration (GSA) |
| Role/Responsibility: | Cooperating Agency/Participating Agency related to LPOE and its connections to SR-11, CVEF, and TCS **Design Approval** |
| Project Component: | **Concurrence/Approval of all NEPA** |
| Invited?/Accepted Role?: | **California** Department of General Services (DGS), in order to differentiate between Federal and State, |

p.3

**U.S? CA?** Regional Water Quality Control Board (RWQCB)

p.9

Issue NOD/ROD: Information "Out": GSA will review and concur with the ROD, but will not be approving

p.10

Circulation of Draft EIS/EIR: is the "Anticipated Date of Information "In"" Winter 2009/2010 – is this current?

**Purpose and Need for the Project**

p.1

2nd Paragraph: Clarify that the "potential future transit center" is not included in the 100 acre site.

p.2

Purpose of the Project

- Appease Congressional, State, International, local business constituencies; and
- Further the process of US plans for improved security and processing legitimate commerce.

Need for the Project

Reference the Feasibility Study earlier in this section (*Expanded Feasibility Study: Otay Mesa and Otay Mesa East Ports of Entry, San Diego, CA. 100%* Report (GSA 2008))

p.5

"An adjoining, privately owned 13-acre parcel on the east could potentially be acquired to allow some expansion on the U.S. side of the existing Otay Mesa POE (Caltrans/GSA 20070". Replace with "A 10-acre parcel was purchased September 2009 to allow for the modernization of the Otay Mesa POE."

p.6

2nd Paragraph: Please update to show Mexico's expansion Plans at the Otay Mesa East LPOE.

3rd Paragraph: To our knowledge, no Diplomatic Notes have been exchanged between the Mexican and US governments, meanwhile letters in support of the project have been exchanged.

**Project Alternatives**

Please confirm if we have already agreed on the one (1) interchange alternative with no exchange at the LPOE.

We appreciate Caltrans' continued cooperation with GSA. If you have any questions, please contact Maureen Sheehan, NEPA Project Manager, (415) 522-3601, or Anthony Kleppe, Senior Asset Manager, (415) 522-3373.

Sincerely,

Maureen Sheehan

NEPA Project Manager

# USCBP Comment Letter on Purpose and Need/Alternatives

610 W Ash Street, Suite 1200
San Diego, CA 92101

U.S. Customs and Border Protection

October 22, 2009

Susanne Glasgow
Deputy District Director, Environmental
Department of Transportation
4050 Taylor Street, MS-242
San Diego, CA 92110

Ms. Glasgow,

Thank you for providing US Customs and Border Protection, San Diego Field Office with the opportunity to review and comment on the Draft Environmental Impact Report/ Tier II Environmental Impact Statement for proposed State Route 11.

After reviewing the documents and plans, the following comments are provided:

1. On the Projected Alternative document at the bottom of page 2 it states "The Tier II POE shape and layout have been adjusted". We are not aware of any adjustments and were not able to identify these adjustments on any of the documents that you sent.
2. The CBP San Diego Field Office contact should be changed from Brad Zerwas to Chris Sanchez. The contact information is as follows:

| | | |
|---|---|---|
| Chris Sanchez<br>US Department of Homeland Security<br>US Customs and Border Protection<br>San Diego Field Office<br>610 W. Ash St., Suite 1200<br>San Diego CA 92101 | 619-652-9966 ext 193 | christopher.g.sanchez@dhs.gov |

If you have any questions please contact Chris Sanchez at 619-652-9966 ext 163.

Sincerely,

Walter A Brinton
Assistant Director Mission Support

# USACE Comment Letter on Purpose and Need/Alternatives

**DEPARTMENT OF THE ARMY**
Los Angeles District, Corps of Engineers
San Diego Section, Carlsbad Field Office
6010 Hidden Valley Road, Suite 105
Carlsbad, California 92011

October 23, 2009

REPLY TO ATTENTION OF:
Office of the Chief
Regulatory Division

Susanne Glasgow
Deputy District Director, Environmental
Department of Transportation, District 11
4050 Taylor Street, MS-242
San Diego, California 92110

Dear Ms. Glasgow:

In response to your request on September 30, 2009, the U. S. Army Corps of Engineers (USACE) was asked to provide comments for the Purpose and Need Statement and Project Alternatives for the State Route 11/Otay Mesa East Port of Entry (Project). We, as a cooperating agency, pursuant to the National Environmental Policy Act (NEPA), Clean Water Act Section 404 Memorandum of Understanding (404 MOU) for Federal Aid Surface Transportation Projects in California, and Section 6002 of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), are providing our comments in the following paragraphs.

Caltrans indicated during the Programmatic Environmental Impact Statement (PEIS) that NEPA for a 404(b)(1) permit would not be triggered because less than 5 acres of impacts would occur to waters of the U.S. and because the early coordination would occur through SAFETEA-LU. We note that under USACE permit requirements, impacts to vernal pools require an Standard Individual Permit (IP), which in addition to a 404(b)(1) analysis, necessitate development, publishing, and adopting either an Environmental Assessment (EA) or an EIS. Therefore, the USACE anticipates adoption of the EIS for this project as a cooperating agency as long as the document meets USACE criteria for an IP. At this time, it appears that a Project Purpose Statement has not been included in the *Draft Purpose and Need for the Project* memorandum dated September 9, 2009. Therefore, we are providing comments to Caltrans for the objectives stated under the heading *Purpose of the Project* on page 2 of the memorandum and anticipate that these objectives would be used in the future to prepare a narrative Project Purpose Statement.

The Project Purpose objectives are stated as follows:

- *Increase inspection processing capacities for commercial and personal vehicles and pedestrians in San Diego/Tijuana region;*
- *Reduce northbound vehicle and pedestrian queues and wait times to cross the border at other POEs in the region;*



- *Accommodate projected increases in international trade and personal cross-border travel in the region;*
- *Contribute to reductions in congestion at existing POEs and along regional transportation infrastructure; and*
- *Allow southbound vehicle and pedestrian trips.*

To meet USACE requirements under a NEPA analysis, a Project Purpose Statement needs to support avoidance or minimization analysis for impacts to vernal pools and other waters of the U.S. By providing an additional objective to the Project Purpose Statement, the Project Alternatives can be fully analyzed to meet the objective. We suggest the addition of an objective that includes minimizing impacts to the aquatic environment.

We note that the Project Alternatives appear incomplete and generally discuss the differences between the interchange structures (IC). Additional biological and project design information should be included in each Project Alternative. For example, we should include which alternatives avoid or minimize impacts to waters of the U.S., the design and number of stream crossings (e.g., soft-bottomed crossings, half culverts or box crossings with no cement bottom), and other pertinent water related concerns. Sometimes it is helpful to include a Conservation Alternative for the decision maker to be able to draw on to ensure avoidance and minimization of impacts to the environment.

In the past, we have found it helpful to develop a Project matrix summary document to be able to capture and describe the differences between Project Alternatives. Matrices are sometimes included in the first chapter of an EIS. We suggest that one be prepared and provided to the cooperating agencies for their consideration and review. The agencies could then ensure that all components and biological impacts of the Project are addressed in the selection and description of Alternatives. The project matrix would summarize impacts to biological attributes (e.g., wildlife and vernal pools) of the project.

Finally, we note that the Otay Mesa East Port of Entry Project footprint identified in the figures that were provided to USACE is larger than what was identified in the PEIS. If the Port of Entry footprint is larger, additional surveys, delineations, or other biological data may be required. Two indicators that typically suggest water presence were noted in the larger footprint, soil type and tamarisk scrub. Based on this notation, we need additional biological information regarding the larger Project footprint.

If you have any questions, please contact Michelle Lee Mattson of my staff at 760.602.4835 or via e-mail at Michelle.L.Mattson@usace.army.mil and refer file No. SPL-2006-00486-MLM.

Sincerely,

Therese O'Rourke
Chief, San Diego Section
Regulatory Division

# USFWS Comment Letter on Purpose and Need/Alternatives

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-SDG-08B0316-10CPA0001

NOV 17 2009

Ms. Susanne Glasgow
California Department of Transportation District 11
4050 Taylor Street, M.S.-242
San Diego, California 92110

Subject: State Route 11/Otay Mesa East Port of Entry – Request for Concurrence on Purpose and Need and Range of Alternatives

Dear Ms. Glasgow:

We are responding to your September 30, 2009, letter requesting concurrence on the Purpose and Need statement and range of alternatives for the proposed State Route 11/Otay Mesa East Port of Entry (SR11/POE) Project. Federal Highway Administration (FHWA), in cooperation with California Department of Transportation (Caltrans), will prepare a Tier II Draft Environmental Impact Statement (DEIS) for the project. A program Phase 1 Environmental Impact Statement has already been completed. The request is in accordance with Section 6002 of Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The Service has agreed to be a Participating Agency for this project and has been participating in interagency workgroup meetings for the project. We commented previously on this project in letters dated June 4, 2007, in response to the Notice of Intent (NOI) for the Phase I Environmental Impact Statement (EIS); March 4, 2008, on the DEIS for Phase 1; and December 8, 2008, on the NOI for the DEIS for this project.

We received a copy of the Environmental Protection Agency's (EPA) comment letter regarding this request and concur with the issues they raised regarding the Purpose and Need statement and the range of alternatives. Although we have been participating in the interagency workgroup meetings, these two issues have not been topics of discussion. We recommend that you organize a meeting with the resource agencies to discuss these topics. In addition, we would like to work with you on how to minimize and offset impacts to sensitive species and habitats.

We appreciate the opportunity to participate in the development of the SR 11/POE Purpose and Need statement. We look forward to continued participation in this project through the

TAKE PRIDE IN AMERICA



NEPA/404 MOU process. If you have any questions or comments pertaining to this letter, please contact Susan Wynn at (760) 431-9440, ext. 216.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor
U.S. Fish and Wildlife Service

cc:
Michelle Mattson, U.S. Army Corps of Engineers, San Diego Field Office
Susan Sturges, U.S. Environmental Protection Agency, Region 9
Pam Beare, California Department of Fish and Game, Region 5

# California DGS Comment Letter on Purpose and Need/Alternatives

State of California • Arnold Schwarzenegger, Governor
State and Consumer Services Agency
**DEPARTMENT OF GENERAL SERVICES**
**Real Estate Services Division • Asset Management Branch**
707 Third Street, 6th Floor • West Sacramento, CA 95605
(916) 376-1829 • Fax (916) 376-1833 • www.dgs.ca.gov

October 29, 2009

Susanne Glasgow
Deputy District Director, Environmental
Department of Transportation
District 11
4050 Taylor Street, MS-242
San Diego, CA 92110

Dear Ms. Glasgow:

Thank you for your September 30, 2009 letter, and for the opportunity to review and comment on the State Route 11/Otay Mesa East Port of Entry Project. Based on the proposed need for the project and project alternatives, the Department of General Services (DGS) looks forward to reviewing the three project alternatives in the Draft EIR/EIS.

In light of the information provided thus far, traffic and trade volumes continue to increase annually and the existing Ports of Entry provide inadequate infrastructure for the volume of traffic. Since the DGS owns two buildings in downtown San Diego and reviews space and acquisition requests for various agencies throughout the San Diego region, it remains committed to the region and future plans concerning land uses.

We appreciate the opportunity to review and comment on the project. If you have any questions, please contact Marissa Betts of my staff at (916) 375-4681.

Sincerely,

Zachary Miller,
Assistant Chief

cc: Ronald L. Diedrich, Acting Director, Executive Office, Department of General Services
Teresa Bierer, Acting Deputy Director, Real Estate Services Division, Department of General Services
Joe Mugartegui, Chief, Asset Management Branch, Real Estate Services Division, Department of General Services

# SANDAG Comment Letter on Purpose and Need/Alternatives

## Comments on the State Route 11 and the Otay Mesa East Port of Entry

1. On page 1 and 2, Purpose and Need of Project; Page 3, Project Alternatives. We would like the 2 acre transit center site adjacent to the Western POE be included in the acquisition and cleared in the EIR, in addition to the 100 acre footprint already being acquired.
2. On page 2 of the Purpose and Need of Project section: 5th bullet should read: southbound commercial and personal vehicle and pedestrian trips.
3. On page 5 of the Purpose and Need of Project section: End of 2nd paragraph, Has GSA acquired the parcel adjacent to the Otay Mesa POE commercial inspection facility already? If so, please update this paragraph.

General comments:

4. Please evaluate the concept of south and north bound pedestrian crossings located on the same side of the POE?
5. Will there be competitive pricing for transit users to encourage transit ridership and less reliance on the vehicle?
6. On page 6 of the Purpose and Need of Project section, Please evaluate design characteristics of southbound facilities in light of recent developments i.e. SIAVE (Mexican Customs southbound inspection tool)
7. Consider future crossborder utility connections in the right of way.

8. Need for sufficient C-TPAT lanes both in number and in length: The Otay Mesa East crossing has always been envisioned to relieve border crossings for personal vehicles, buses, pedestrians and commercial vehicles. But commercial vehicles will be critical toll payers who will help insure the success of the project for all crossers at Otay Mesa East. Therefore, we'll want to make sure that sufficient traffic lanes are planned for commercial vehicles and in particular those commercial vehicles which are known shippers, or C-TPAT certified carriers. The biggest challenge trucking companies continue to face with the C-TPAT/FAST program is the lack of 'true' FAST lanes – in essence, lanes that extend far back from the port of entry, instead of FAST lanes that begin only a few yards prior to arrival at the primary inspection booth is a problem at many truck gateways. Inadequate lanes for C-TPAT carrier's results in low-risk C-TPAT carriers being stuck in the same traffic as non-C-TPAT certified carriers. Thus, C-TPAT certified motor carriers with drivers who have undergone FAST background checks are not getting the benefits that were promised for investing to comply with the program. Adequate C-TPAT lanes will ensure the success of this tolled border crossing.

9. Ownership of the POE facility Page 1 on Purpose and Need, second paragraph currently states that the POE would be owned or maintained by the General Services Administration. Note that the enabling legislation for the project SB 1486 is less specific and says that and port of entry facilities will be owned by a federal agency.

10. No Toll Variation Page 5 in the project alternatives document indicates Caltrans will study a "no toll variation". SB 1486, the "Otay Mesa Toll Facility Act" states that "*This bill would enact the Otay Mesa East Toll Facility Act, which would authorize SANDAG to, among other things, solicit and accept grants of funds and to enter into contracts and agreements for the purpose of establishing highway toll projects to facilitate the movement of goods and people along the State Route 11 corridor in the County of San Diego or at the Otay Mesa East Port of Entry.*" It is anticipated that tolls will be a primary component of project financing.

# County of San Diego Comment Letter on Purpose and Need/Alternatives

ERIC GIBSON
DIRECTOR

County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666
INFORMATION (858) 694-2960
TOLL FREE (800) 411-0017
www.sdcounty.ca.gov/dplu

November 5, 2009

Kelly Finn, Chief of Environmental Analysis
Department of Transportation, District 11
4050 Taylor Street, MS-242
San Diego, California 92110
Fax 619-688-4277

**REQUEST FOR REVIEW AND COMMENT OF THE PURPOSE AND NEED, AND RANGE OF ALTERNATIVES FOR THE SR-11/OTAY MESA EAST PORT OF ENTRY PROJECT**

The County of San Diego has received and reviewed the Purpose and Need, and Range of Alternatives for the SR-11/Otay Mesa East Port of Entry project dated September 30, 2009 and appreciates this opportunity to comment as a Participating Agency. In response to the document, the County has comments that identify potentially significant environmental issues that may have an affect on the unincorporated lands of San Diego County. As the project moves forward, the County hopes to work with Caltrans to explore alternatives and mitigation measures that can be discussed in the environmental document.

County Department of Planning and Land Use (DPLU) and Department of Public Works (DPW) staff have completed its review and have the following comments regarding the content of the above documents:

**GENERAL COMMENTS**

1. The County of San Diego, Land Use and Environment Group has developed Guidelines for Determining Significance that are used as guidance for determining the significance of environmental impacts in the unincorporated portions of the County of San Diego. The Guidelines also provide mitigation options for addressing potentially significant impacts. Project impacts that could have potentially significant adverse effects to the unincorporated County or



County facilities, should evaluate and mitigate environmental impacts using the guidance described in the County of San Diego Guidelines for Determining Significance, available online at: http://www.sdcounty.ca.gov/dplu/procguid.html#guide

**PLANNING COMMENTS**

2. The proposed project is necessary for the development of the East Otay Mesa Specific Plan, an area that encompasses over 2,000 acres located east of the City of San Diego and north of the U.S. Mexico Border. The Specific Plan area is planned for a wide range of industrial and business park uses that will rely on the proposed project for access to Mexico, the City of San Diego and Chula Vista. Should the project not occur, or should the project omit adequate access to/from the Specific Plan Area, it would severely impact the development within the Specific Plan and reduce its future economic benefits to the San Diego region.

3. The County is currently processing 16 active permits within the East Otay Mesa Specific Plan, including several large-scale industrial subdivisions. Active permits cover approximately 80% of the geographic area planned for industrial development within the Specific Plan. These projects, however, are experiencing challenges in terms of establishing adequate infrastructure to handle traffic to/from Mexico and the region. SR-11 is a key component of the planned infrastructure system. Based on the current high-level of permitting activity, the time is ripe for industrial development within East Otay Mesa. The timing and design of SR-11 will therefore impact the region's ability to take advantage of this long-awaited economic opportunity.

4. The SR-11 project is key to achieving one of the goals in the Specific Plan, which is accommodating the distribution and warehousing of products manufactured in Mexico.

5. The purpose of the Tier II project (Pg.2) does not include facilitation of goods movement through and within East Otay Mesa. The purpose of the Tier II project should include a listed statement to ensure adequate access to East Otay Mesa for commercial goods movement, cross border travel and interregional traffic.

6. The purpose of the project objectives should include consistency with the recently adopted Complete Streets Act which will become affective in January 2011. Consistency with adopted General Plans and Specific Plans for the region should also be included, as referenced in the Complete Streets Act.

**PROJECT ALTERNATIVES**

7. The County Board of Supervisors approved the East Otay Mesa Specific Plan as a means to foster economic development opportunities along the U.S./Mexico

# County of San Diego Comment Letter on Purpose and Need/Alternatives



border. The Specific Plan and the Circulation Element identify two full interchanges located at Enrico Fermi Drive and Siempre Viva Road. It should be noted that the Two Interchange Alternative is somewhat consistent with the Specfic Plan, by having interchanges at Enrico Fermi Road and Siempre Viva Road. The One Interchange and No Interchange Alternatives are inconsistent with the County's East Otay Mesa Specific Plan and General Plan Circulation Elements.

8. The Purpose and Need (Pg.2) states that the Two Interchange Alternative proposes the Siempre Viva Road interchange would be a half interchange. The Siempre Viva Road interchange is proposed as a full interchange in the Specific Plan. The Tier II Draft EIR/EIS should clearly demonstrate the basis for not proposing a full interchange at Siempre Viva Road. The Siempre Viva Road Full Interchange should be included in the *Variations on the Build Alternatives* (Pg.5).

9. County staff have significant concerns with any reduction in the number of interchanges as the current local road network has been developed based on two full interchanges.

10. The Tier II Draft EIR/EIS should discuss if the proposed SR-11/OME POE project may require improvements to connecting County roads and/or reconfiguration of County roads. The extent of improvements that may be required to connect and/or parallel County roads should also be discussed.

11. The proposed Siempre Viva Road Interchange (Figure 1) and other POE related facilities should align with proposed Circulation Element roads or provide discussion as described above.

12. Property owners in the East Otay Mesa Specific Plan area have expressed needs and interest in additional access to the County mesa area in the vicinity of the SR-905/SR-11/SR-125 freeway-to-freeway interchange. Proposals for auxiliary ramps have been requested by the proposed owners. The Tier II EIR/EIS should evaluate and consider additional access alternatives, where feasible, in the final design of the freeway-to-freeway interchange. A potential option would be an off-ramp that splits off from the westbound to eastbound SR-905/SR-11 connector and then drops down to connect with the southern terminus of Harvest Road. SR-905 westbound access to Otay Mesa Road should be considered due to the potential beneficial effects to the SR-11/SR-905 interchange and access to the East Otay Mesa area.

13. It should be noted that the County is currently processing proposed discretionary projects in the East Otay Mesa area that would be directly affected by the location of the SR-11/POE project. Three projects potentially affected are: 1) Otay Crossings Commerce Park, 2) Otay Business Park and 3) RTX Truck Park and Storage.



The County of San Diego appreciates the opportunity to continue to participate in the environmental review process for this project. We look forward to receiving and future environmental documents related to this project, the DEIR for review, or providing additional assistance at your request. If you have any questions regarding these comments, please contact LeAnn Carmichael at (858) 694-3739 or via email at leann.carmichael@sdcounty.ca.gov.

Sincerely,

ERIC GIBSON, Director
Department of Planning and Land Use

cc: Michael De La Rosa, Policy Advisor, Board of Supervisors, District 1 (via email)
Vince Nicoletti, Group Program Manager, DPLU, (via email)
Megan Jones, CAO Staff Officer, DCAO, (via email)
Bob Goralka, Department of Public Works, Transportation Division, (via email)
LeAnn Carmichael, Land Use/Environmental Planning Manager, Department of Planning and Land Use (via email)
Priscilla Jaszkowiak, Administrative Secretary, Department of Planning and Land Use, (via email)

# City of San Diego Comment Letter on Purpose and Need/Alternatives

THE CITY OF SAN DIEGO

October 30, 2009

Department of Transportation
District 11
Attn: Kelly Finn, Chief of Environmental Analysis-Branch A
4050 Taylor Street, MS-242
San Diego, CA 92110

Dear Kelly Finn:

Subject: **CITY OF SAN DIEGO COMMENTS ON THE REQUEST FOR REVIEW AND COMMENT ON THE PURPOSE AND NEED, AND RANGE OF ALTERNATIVES FOR THE STATE ROUTE 11/OTAY MESA EAST PORTOF ENTRY PROJECT**

The City of San Diego ("City") has received and reviewed the above referenced project and appreciates this opportunity to provide comments to the Department of Transportation. We also appreciate the opportunity to be part of the early interagency coordination on the project. In response to the Request for Review and Comment, the City has identified potential environmental issues that may have a significant environmental impact.

Staff from the Environmental Services Department (ESD) has reviewed the Request for Review and Comment and have the following comments regarding the content of the DEIR. Additionally, LDR-Transportation has provided comments in the form of a City Memo which is attached to this document.

**City of San Diego, Environmental Services Department (ESD): Alli Carmen (858) 627-3302**

1. The management of solid waste is typically a local government function. The State Rout 11 Project will generate a magnitude of waste that will place a burden on public service in San Diego, as well as Chula Vista. In addition, the State's Integrated Waste Management Act passed by state legislature in 1989 requires local government to reduce the amount of waste generated within their borders by 50%. Thus, any waste generated from commercial, residential, industrial, government, or any other source within the City of San Diego's boundaries must be diverted and reduced to acceptable levels.

**Development Services**
1222 First Avenue, MS 501 • San Diego, CA 92101-4155
Tel (619) 446-5460



2. Please provide estimates of the amount of construction and demolition waste that will be generated as a result of this project, as well as measures that will be taken to minimize or mitigate potential impact to local landfills. In addition, please specify how much of the waste will be diverted or re-used on-site. Construction and demolition waste is especially recyclable, and if segregated properly onsite, can yield a high percentage of material that may be taken to the proper recycling facility for monetary compensation. The Environmental Services Department can provide any needed information regarding local recycling centers and the proper segregation and disposal of materials.

**City of San Diego, Engineering and Capital Projects Department (ECP): Jim Lundquist (619)533-3045**

1. As part of the SR-11 Traffic Impact Statement (TIS), a comprehensive review of the truck routes to and from the commercial port should be conducted. These commercial trucks frequently travel City streets to off-site storage and parking locations to change drivers, tractors and trailers. Because commercial trucks have a higher Passenger Car Equivalent factor (PCE), careful analyze is required for this component of the port and freeway plans.

2. Also – Enrico Fermi Drive is a planned City street, and thoughtful discussion and review of impacts needs to be a part of the TIS for the project. It may be possible that additional lanes or special treatment at intersections near the proposed SR-11 will be required to handle the traffic, both automobile and truck.

Please contact the above-named individual if you have any questions on the submitted comments. The City respectfully requests that you please address the above comments in the EIR/EIS.

Sincerely,

Cecilia Gallardo, AICP
Assistant Deputy Director
Development Services Department

CG:ALM

Enclosure: LDR Transportation Memo, dated October 29, 2009

cc: Anna L. McPherson, AICP, Senior Planner, Development Services Department
Ann French Gonsalves, R.T.E., Senior Traffic Engineer, Development Services Department
Alli Carmen, Environmental Services
Jim Lundquist, Engineering and Capital Projects Department

# City of San Diego Comment Letter on Purpose and Need/Alternatives

**CITY OF SAN DIEGO**
**MEMORANDUM**

**DATE:** October 29, 2009

**TO:** Anna McPherson, Environmental Analysis Section

**FROM:** Ann French Gonsalves, Transportation Development Section

**SUBJECT:** Request for Review and Comment on the Purpose and Need, and Range of Alternatives for the State Route 11/Otay Mesa East Port of Entry Project

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We have reviewed the information provided by Caltrans on the Purpose and Need, and Range of Alternatives for the State Route 11/Otay Mesa East Port of Entry Project dated September 30, 2009 and offer the following comments:

**1.** The Draft Environmental Impact Report /Tier II Environmental Impact Statement (Draft EIR/EIS) should identify any significant traffic impacts to City of San Diego transportation facilities due to development of the SR-11/Otay Mesa East Port of Entry project. Any identified traffic impacts should be minimized (through selection of alternative) and mitigated.

**2.** The significance thresholds listed on pages 70 -71 of the *City of San Diego's Significance Determination Thresholds (January 2007)* should be used to evaluate significant traffic impacts in the City of San Diego.

**3.** The EIR/EIS should take into account the City's Otay Mesa Community Plan Update currently underway. Transportation modeling efforts should use the City's preferred land use alternative.

**4.** The document should account for truck traffic in terms of passenger car equivalents per standard industry practice.

Should you have any questions or need additional information, please contact me at (619) 446-5294 or Ismail Elhamad at (619) 446-5494.

Ann French Gonsalves, R.T.E.
Senior Traffic Engineer

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# Chapter 6
# List of Preparers

# CHAPTER 6.0 – LIST OF PREPARERS

This EIR/EIS was prepared by HELIX Environmental Planning, Inc. under the direction of Tamara Ching, for Caltrans and FHWA. Caltrans oversight was also provided for NEPA compliance. The following persons participated in preparation of the EIR/EIS and its associated technical studies:

**Caltrans District 11**

Sandra Lavender, Associate Environmental Planner, Environmental Generalist; B.A. Urban Studies and Planning – University of California San Diego; 9 years of Caltrans experience.

Mario H. Orso, Corridor Director; B.S. Civil Engineering, San Diego State University; Registered Professional Engineer Civil, License # C056817; 19 years of Caltrans experience.

Jacqueline Appleton-Deane, Project Manager, Program/Project Management; B.S. Civil Engineering, San Diego State University; 22 years of Caltrans experience.

Nicola Bernard, Senior Transportation Engineer (Design Manager); B.S Civil Engineering, San Diego State University; Registered Civil Engineer; 22 years of Caltrans experience.

Kim T. Smith, Senior Environmental Planner, Branch Chief, Environmental Resource Studies (Natural Science); B.S. Biology, San Diego State University; 13 years of Caltrans experience.

Michelle Trudell, Associate Environmental Planner, Environmental Stewardship; M.A. City Planning, San Diego State University, B. A. Environmental Studies, University of California Santa Barbara; 13 years of Caltrans experience.

Maurice Eaton, Senior Transportation Planner; B.S. Business Administration, University of Redlands; 27 years of Caltrans experience.

David Strickland, Lead Landscape Architect; M. Landscape Architecture, Cal Poly Pomona, B.S. Resource Management and Planning from Arizona State University; 11 years Caltrans experience.

Jayne Dowda, Senior Transportation Engineer, Branch Chief, Environmental Engineering; B.S. Civil Engineering - San Diego State University; Registered Civil Engineer; 11 years of Environmental Engineering experience, 26 years Caltrans experience.

Ken Johansson, P.E. (70391), Air Quality Specialist; B.S. Civil Engineering, San Diego State University; 8 years of highway design experience (4 years of Caltrans experience).

Bruce April, Senior Environmental Planner, Environmental Stewardship Branch Chief, Agency Coordinator; B.S. Biology, San Diego State University; 20 years of Caltrans experience.

Michael Galloway, Associate Environmental Planner, Environmental Resource Studies (Natural Resources); M.S. Marine Biology, B.S. Human Biology; 9 years of Caltrans experience.

Fardad Behboody, Transportation Engineer; Master of Engineering and B.S. – Civil Engineering, Old Dominion University, Norfolk; Registered Civil Engineer; 10 years of Caltrans experience.

**Caltrans District 11 (cont.)**

Joel Kloth, Engineering Geologist, Environmental Engineering; B.S. Geology, California Lutheran University Thousand Oaks; 5 years of experience in the oil industry, 16 years of experience geotechnical and environmental consulting, 11 years of Caltrans experience.

Karen C. Crafts, Associate Environmental Planner, Archaeologist; B.S Anthropology, San Diego State University; 27 years of Caltrans experience.

Tony Blades, Associate Transportation Planner, Travel Demand Modeler; 22 years of Caltrans experience.

Pat Kipling, Senior Right of Way Agent, Project Coordination Branch; B.S. – Southern Illinois University; 22 years of Caltrans experience.

Melisa Wiedemeier, Professional Engineer, Caltrans Hydraulics.

May Alsheikh, Transportation Engineer; B.S. – Civil Engineering, San Diego State University; Registered Civil Engineer; 11 years of Caltrans experience.

Susanne Glasgow, former Deputy District Director, Environmental Division; B.A. Geography – Environmental and Resource Conservation from San Diego State University; 30+ years of Caltrans experience.

Kelly Finn, former Senior Environmental Planner, Environmental Analysis Branch Chief; M.S. Natural Resources Conservation - University of Massachusetts Amherst; B.A. Biology and Environmental Studies, B.A. Biology and Environmental Studies; – University of California Santa Cruz; 10 years of Caltrans experience.

Martin Rosen, former Senior Environmental Planner, Cultural Resources Studies (RPA certified); M.A., B.A. Anthropology, University of California Los Angeles; 30 years of Caltrans experience.

Mark Baza, former Project Manager, Program/Project Management; B.A. Urban Studies and Planning, University of California San Diego, 21 years of Caltrans experience.

**FHWA**

Cesar Perez, Senior Transportation Engineer, M.S. Traffic Engineering, B.S. Civil Engineering – University of Nebraska, B.S. Civil Engineering, University of Puerto Rico; 30+ years FHWA experience.

**HELIX Environmental Planning, Inc.**

Tamara S. Ching, Planning Division Manager/Senior Project Manager, M.S. Administration; B.A. Social Ecology – University of California Irvine; 33 years of environmental experience.

Stacy Hall de Gomez, Project Manager, M.M.A. Fisheries Economics and Marine Policy – University of Washington, B.Sc. Biology – University of Edinburgh, Scotland; 10 years of environmental experience.

Lisa Capper, Senior Project Manager, J.D. – Western State University, B.A. Anthropology – Prescott College; 35 years of environmental experience.

**HELIX Environmental Planning, Inc. (cont.)**

Dennis Marcin, Senior Environmental Specialist, B.S. Geology – Michigan State University; 30 years of environmental experience.

Melissa J. Whittemore, Project Manager, B.S. Biology with an emphasis in Ecology – San Diego State University; 9 years of environmental experience.

Dawna De Mars, Environmental Planner, B.S. Avian Science, B.A. Economics – University of California, Davis; 6 years of environmental experience.
Vanessa Brice, Environmental Planner, B.A. Biology – University of San Diego; 3 years of environmental experience.

Greg Mason, Vice President, Biological Services Division and Senior Scientist, B.S., Natural Resources Planning & Interpretation – Humboldt State University; 17 years of biological resources survey/analysis experience.

Deborah Leonard, Senior Scientist, B.A. Natural Resources/Environmental Geography – San Diego State University; 18 years of biological resources survey/analysis experience.

Stacy Nigro, Biologist, B.S. Forest Resources and Conservation – University of Florida Gainesville; 9 years of biological resources survey/analysis experience.

R. Bradley Lewis, ASLA - CA RLA 2657, LEED® AP, Landscape Architecture Group Manager, B.S. Landscape Architecture – California Polytechnic University; 29 years of landscape architecture/visual assessment experience.

Amy Hoffman, ASLA, Project Landscape Architect, M. Landscape Architecture – California State Polytechnic University, B.A. Liberal Arts – Pomona College; 9 years of landscape architecture/visual assessment experience.

Kevin Mock, Landscape Architect, M. Landscape Architecture – University of Oregon, B. Landscape Architecture – University of Oregon, B.A. Geography – San Diego State University; 6 years of landscape architecture/visual assessment experience.

Charles Terry, Acoustics and Noise Group Manager, B.S. Mechanical Engineering – San Diego State University; 33 years of noise/acoustics assessment/control experience.

Alexander John, Environmental Specialist, B.S. Environmental Engineering – University of Southern California; 1 year of noise/acoustics assessment/control experience.

Justin Palmer, GIS Group Manager, B.A. Geography, Natural Resource and Environmental Conservation – San Diego State University; 7 years GIS experience.

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2010a Hydrology & Hydraulics Report, State Route 11 Corridor & Commercial Vehicle Enforcement Facility. April 14.

2010b Hydrology & Hydraulics Report, State Route 11 Port of Entry (POE). April 14.

2010c State Route 11 Commercial Vehicle Enforcement Facility & Otay Mesa East Port of Entry Water Quality Report.

2009a Begin Environmental Milestone Approval Sheet/Otay Mesa East Port of Entry Space Needs Summary. June 17.

2009b Draft Commercial Vehicle Enforcement Facility (CVEF) Alternatives Analysis Report. March 17.

2009c Personal communications via email between Mr. Michael Bruning of AECOM and Mr. Dennis Marcin of HELIX Environmental. October 28, 29 and 30; November 6, 13, 25 and 30; December 1.

AECOM/Caltrans

2009a Draft Preliminary Traffic Management Plan Report.

2009b Preliminary Project Construction Cost Estimate. September.

American Public Works Association (APWA)

2006 Greenbook Committee of Standard Specifications for Public Works Projects. 14th Edition.

Association of Environmental Professionals (AEP)

2007 California Environmental Quality Act Statutes and Guidelines (State CEQA Guidelines).

Atwood, J.

1990 Status review of the California gnatcatcher (*Polioptila californica*). Unpublished technical report, Manomet Bird Observatory, Manomet, Massachusetts. 79 pp.

Barrett Consulting Group

1993 California Route 905 Floodplain Evaluation Report Summary. October 22.

Bauder, E.T.

1987 Threats to San Diego vernal pools and a case study in altered pool hydrology. Pages 209-214 in T.S. Elias, ed. Conservation and management of rare and endangered plants. California Native Plant Society, Sacramento, California.

Bond, Monica

2003 Principles of Wildlife Corridor Design. Center for Biological Diversity. October.

Boyle Engineering Corporation (Boyle)

2007 Existing Conditions Hydrology Report, State Route 11 Programmatic EIR/EIS. October.

California Air Resources Board (ARB)

n.d. Health Effects of Diesel Exhaust Particulate Matter. Available at: http://www.arb.ca.gov/research/diesel/dpm_health_fs.pdf

2009a Ambient Air Quality Standards. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. November.

2009b Aerometric Data Analysis and Measurement Database. http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start. November.

2007 2006 State Area Designations. July 26. 2004 California Air Quality Data Summaries. Available at: http://www.arb.ca.gov.

2003 California Air Quality Data Summaries. Available at: http://www.arb.ca.gov.

2002 California Air Quality Data Summaries. Available at: http://www.arb.ca.gov.

2000a Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

2000b Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. October.

California Association of Resource Conservation Districts

2002 *Guide to Watershed Project Permitting for the State of California*. Available at: http://www.carcd.org/permitting/pguide.pdf.

California Burrowing Owl Consortium

1993 Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

California Department of Conservation (CDC)

2006 Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County. June 5.

2004 A Guide to the Farmland Mapping and Monitoring Program, Publication No. FM- 92-02. Division of Land Resources Protection.

2000 A General Location Guide for Ultramafic Rocks in California-Areas Likely to Contain Naturally Occurring Asbestos. Available at: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf.

1992 A Guide to the Farmland Mapping and Monitoring Program, Publication No. FM-92-01. Division of Land Resources Protection.

California Department of Forestry and Fire Protection

2007 Personal communication between Mr. Pete Scully of California Department of Forestry and Fire Protection and Ms. Karen Brandt of HELIX Environmental Planning, Inc. October 5.

California Department of Fish and Game (CDFG)

2007 California Wildlife: Conservation Challenges. California's Wildlife Action Plan. Available at: http://www.dfg.ca.gov/wildlife/WAP/docs/report/full-report.pdf

1995 Staff Report on Burrowing Owl Mitigation.

California Department of Justice

2008 Office of the California Attorney General Global Warming Measures. Available at: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf. December.

California Department of Toxic Substances Control (DTSC)

2009 Cortese List (Government Code Section 65962.5). Available at: http://www.envirostor.dtsc.ca.gov/public/search.asp?PAGE=13&CMD=search&ocieerp=False&business_name=&main_street_number=&main_street_name=&city=&zip=&county=&branch=&status=ACT%2CBKLG%2CCOM&site_type=CSITES%2COPEN%2CFUDS%2CCLOSE&cleanup_type=&npl=&funding=&reporttype=CORTESE&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&permitted=&corrective_action=&spec_prog=&national_priority_list=&senate=&congress=&assembly=&critical_pol=&business_type=&case_type=&display_results=&pub=&ORDERBY=upper%28business_name%29&next=Next+50#heading. November 16.

California Department of Transportation (Caltrans)

2010a Supplemental Historic Property Survey Report for State Route 11 and East Otay Mesa Port of Entry. February.

2010b Storm Water Quality Handbooks: Project Planning and Design Guide.

2010c Paleontological Update for the State Route 11/Otay Mesa East Port of Entry Project, City and County of San Diego, California. January 21.

2010d Air Quality Technical Report for Construction Emissions for State Route 11 and the Otay Mesa East Port of Entry. July.

2010e Noise Abatement Decision Report, From Britannia Blvd. on SR 905 to the Border of Mexico East of SR 905/Otay Mesa Border Crossing, Construction of 4-Lane Freeway 11-SD-905-PM R8.4-10.1 and 11-SD-11-PM 0.0-2.1 EA 056310. June.

2009a Scenic Highway Web Site. Available at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm.

2009b Supplemental Historic Property Survey Report for State Route 11 and East Otay Mesa Port of Entry. October.

2009c Proposed State Route 11 Extension: Hydrogeologic Site Assessment/Storm Water Data Report. September 9.

2009d Estimated Loads for HSA 911.12. Available at: http://www.water-programs.com/wqpt/HSA.asp?HSA=491112. November 20.

2009e Proposed State Route 11 Extension: Supplemental District Preliminary Geotechnical Report. October 7.

2008a State Route 11 and the Otay Mesa East Port of Entry, Final Program Environmental Impact Report/Phase I Environmental Impact Statement. August.

2008b Historic Property Survey Report for State Route 11 and East Otay Mesa Port of Entry. January.

2007a California Department of Transportation Highway Design Manual. Updated through January 4.

2007b Environmental Handbook 1, Chapter 20 – Section 4(f) and Related Requirements. August 8.

2007c Guidance for Preparers of Growth-related, Indirect Impact Analyses. October. Available at: http://www.dot.ca.gov/ser/Growth-related_IndirectImpactAnalysis/gri_guidance.htm#3_1.

2007d Storm Water Quality Handbook: Construction Site Best Management Practices Reference Manual, CTSW-RT-06-171.11-1. March 7.

2007e Storm Water Quality Handbook: Project Planning and Design Guide. May.

2007f Climate Action Program at Caltrans. Available at: http://www.dot.ca.gov/docs/ClimateReport.pdf.

California Department of Transportation (Caltrans) (cont.)

2006a California Department of Transportation Standard Specifications. May.

2006b California Department of Transportation Guidelines for Structures Foundation Reports. Version 2.0, March.

2006c Caltrans Traffic Noise Analysis Protocol. August.

2006d Standard Specification Section 7-1.01I, "Sound Control Requirements." May.

2004a "Bottleneck Study": Transportation Infrastructure and Traffic Management Analysis of Cross Border Bottlenecks. November.

2004b Route 905 Final Environmental Impact Statement/Report. July.

2003a Caltrans Storm Water Quality Handbooks, Construction Site Best Management Practices Manual. March 1.

2003b Statewide Storm Water Management Plan (SWMP), CTSW-RT-02-008. May.

2003c Caltrans Construction Site Storm Water Quality Sampling Guidance Manual. CTSW-RT-03-116.31.30. December.

2003d Caltrans Storm Water Quality Handbooks, Maintenance Staff Guide, CTSW-RT-02-057. May.

2001 Field Guide to Construction Dewatering, CTSW-RT-01-010. October.

2000 Project Study Report (Project Development Support), State Route 11. Approved by Gary L. Gallegos, District 11 Director, on September 16.

1999 California Department of Transportation Project Development Procedures Manual, Chapter 18 and Chapter 30.

1998 Caltrans Technical Noise Supplement. October.

1997 Conducting Socioeconomic Analysis.

1987 California Department of Transportation Standard Test Methods, 3rd Edition, as updated.

Caltrans/U.S. General Services Administration (GSA)

2007 Otay Mesa and Otay Mesa East Feasibility Study (FS) Presentation of 50% Submittal. July 31.

California Department of Water Resources (DWR)

2003 California's Groundwater. Bulletin No. 118. October 1.

1986 San Diego Region Ground Water Studies Phase III, El Cajon Hydrologic Subarea, Otay Hydrologic Subunit, Sweetwater Hydrologic Subarea, San Ysidro Hydrologic Subarea, San Clemente Hydrologic Subunit. October.

California Energy Commission

2009a 2009 Integrated Energy Policy Report (Draft Committee Report). Available at: http://www.energy.ca.gov/2009publications/CEC-100-2009-003/CEC-100-2009-003-CTD.PDF.

2009b 2008 Net System Power Report. Available at: http://www.energy.ca.gov/2009publications/CEC-200-2009-010/CEC-200-2009-010.PDF.

2008 Energy Almanac Overview of California. Available at: http://www.energyalmanac.ca.gov/overview/index.html.

2007 2007 Integrated Energy Policy Report. Available at: http://www.energy.ca.gov/2007publications/CEC-100-2007-008/CEC-100-2007-008-CMF.PDF.

California Geological Survey (CGS, formerly the California Division of Mines and Geology [CDMG])
1977 Geology of the National City, Imperial Beach and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California. Map Sheet 29.
1963 Mines and Mineral Resources of San Diego County, California. County Report 3.

California Integrated Waste Management Board
2009 Solid Waste Information System. Available at: http://www.ciwmb.ca.gov/SWIS.

California Invasive Plant Council
2006 California Invasive Plant Inventory. February, as amended in 2007.

California Office of the Attorney General
2008 The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Level – Generally Applicable Global Warming Measures. December 9.

Cassidy Turley/BRE Commercial.
2010 Industrial Market Report - Third Quarter 2010, San Diego County www.brecommercial.com

Chung, Yong Jae, U.S. Army Corps of Engineers
2009 E-mail communication.

CIC Research
2010 Research for the proposed SR-11 and Otay Mesa East POE.

City of San Diego (City)
2010 Metropolitan Wastewater Department Website. http://www.sandiego.gov/mwwd/
2009 Otay Mesa Community Plan Update Modified Scenarios 4B and 3B. Updated May 27. Available at: http://www.sandiego.gov/planning/community/profiles/otaymesa/cpu/about/maps.shtml.
2008 City of San Diego General Plan. March 10.
2007 Otay Mesa Public Facilities Financing Plan FY 2007. Available at: http://www.sandiego.gov/planning/facilitiesfinancing/plans/pdf/omparkproj.pdf.
1997 Multiple Species Conservation Program: City of San Diego MSCP Subarea Plan. March.
1993 Otay Mesa Community Plan (OMCP)
1980 Otay Mesa Public Facilities Financing Plan FY 2007. Available at: http://www.sandiego.gov/planning/facilitiesfinancing/plans/pdf/omparkproj.pdf.
1938 City Planning Commission Report on Refuse Dumps. January 31.

Council on Environmental Quality (CEQ)
1997 Guidance on NEPA Analysis for Transboundary Impacts. July 1. Available at: http://www.nepa.gov/nepa/regs/transguide.html.

County of San Diego (County)
2010 East Otay Mesa Business Park Specific Plan. As amended by SPA 10-001. September 15.
2009a EOMSP Amendment.
2009b Land Use Agenda Item: EOMSP – Approve Joint Community Facilities Agreement to Provide Funding for Sheriff's Facilities in East Otay Mesa (District 1). September 23.
2008a Example Otay Land Use Map – Draft General Plan. September.
2008b East Otay Mesa Land Use Plan Sub Area 2. May 19. Available at: http://www.sdcounty.ca.gov/dplu/docs/EOM_Pages_1-38.pdf
2007a East Otay Mesa Specific Plan Amendment. August 1.
2007b Letter from Mr. Cid Tesoro, San Diego County Department of Public Works Watershed Protection Program Manager, to Mr. Tim Brownson, Caltrans District 11 District Hydraulic Engineer, regarding Floodplain Impact Assessment requirements for the proposed Otay Mesa POE and SR-11. July 3.
2007c County of San Diego Guidelines for Determining Significance, Paleontological Resources. March 19.
2005a East Otay Mesa Business Park Specific Plan: Subarea 1. November 2.
2005b County Code of Regulatory Ordinances, Section 36, Chapter 4: Noise Abatement and Control. June 9.
2002 EOMSP Amendment (SPA 00-005).
1997 Multiple Species Conservation Program (MSCP), County of San Diego Subarea Plan. October 22.
1994 East Otay Mesa Specific Plan (EOMSP), as amended June 12, 2002.
1993 EOMSP EIR
1991 Department of Planning and Land Use, Guidelines for the Implementation of the California Environmental Quality Act.
1985 Department of Public Works Solid Waste Disposal Facilities Map. January.
1979 County General Plan. As amended.

Cowardin, L.M., F.C. Golet, and E.T. LaRoe.
1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, Department of Interior. December.

Cox, Marney
2007 No Recession Likely for San Diego's Slowly Growing Economy. San Diego Metropolitan Uptown Examiner & Daily Business Report. January. Available at: http://www.sandiegometro.com/2007/jan/economy.php.

Customs and Border Protection (CBP), General Services Administration (GSA), and Interagency Security Committee (ISC)
2007a Security and Information Technology Supplemental Guide. June 29.
2007b Western Hemisphere Travel Initiative in the Land and Sea Environments: Draft Programmatic Environmental Assessment. June.
2006 Land Port of Entry Design Guide. March.

Darnell & Associates, Inc.
2007 Traffic Assessment Update for the East Otay Mesa Specific Plan Amendment. Prepared for the County of San Diego. June.

Deméré, T.A.
1988 Early Arikareean (late Oligocene) vertebrate fossils and biostratigraphic correlations of the Otay Formation at EastLake, San Diego County, California.

EDAW, Inc.
2001a Botanical Technical Report for the East Otay Mesa Specific Plan Amendment Area. Prepared for the County of San Diego. October.
2001b Wildlife Technical Report for the East Otay Mesa Specific Plan Amendment Area. Prepared for the County of San Diego. October.

Eng, L.L, D. Belk, and C.H. Eriksen
1990 Californian Anostraca: distribution, habitat, and status. *Journal of Crustacean Biology* 10(2): 247-277.

Environmental Law Institute
2005 NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles. 35 ELR 10273.

Federal Emergency Management Agency (FEMA)
2002 Flood Insurance Rate Map (FIRM) Index Map, Panel No. 06073CINDO. July 2.
1997a FIRM Panel No. 06073C2179F. June 19.
1997b FIRM Panel No. 06073C2183F. June 19.
1997c FIRM Panel No. 06073C2178F. June 19.

Federal Highway Administration (FHWA)
2009a Measuring Border Travel Time for Freight: Otay Mesa International Border Crossing. ITS America Annual Meeting. June 1.
2009b Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents. September 30.
2009c Highways and Climate Change. Available at: http://www.fhwa.dot.gov/hep/climate/index.htm.
2008 Record of Decision: Tier I SR-11 and Otay Mesa East POE. September.
2006a *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and $PM_{10}$ Nonattainment and Maintenance Areas* (PM Guidance).
2006b Interim Guidance on Air Toxic Analysis in NEPA Documents. February.
2006c *A Methodology for Evaluating Mobile Source Air Toxics Emissions Among Transportation Project Alternatives.* Available at: http://www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm.
2005 A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives.
2004 Record of Decision: SR-905. July 23.
1981 Visual Impact Assessment for Highway Projects. March.

Federal Transit Administration
1996 Roadway Noise Construction Model, Version 1.01996.

Friends of Otay Valley Regional Park
2009 Otay Valley Regional Park Website. Available at: http://www.ovrp.org/.

Gallegos and Associates
1999 State Route 905 Historic Property Survey Report. April.
1998 Management Plan for Otay Mesa Prehistoric Resources. September.

GSA

2009a San Ysidro Land Port of Entry Improvements Project Final EIS. August.
2009b Record of Decision: San Ysidro Land Port of Entry Improvements Project. September.
2009c Personal communication via telephone between Mr. Anthony Kleppe of GSA and Ms. Stacy Gomez of HELIX Environmental Planning, Inc.. December 15.
2008 Expanded Feasibility Study: Otay Mesa and Otay Mesa East Ports of Entry, San Diego, CA. 100% Report. June.
2007 Otay Mesa and Otay Mesa East Feasibility Study (FS) Presentation of 50% Submittal. July 31.
1999 PBS National Environmental Policy Act NEPA Desk Guide. October.

GSA/U.S. Customs and Border Protection (CBP)

2007 San Ysidro Port of Entry Fact Sheet: Reconfiguration and Expansion of the Existing Port of Entry. September.

Hamilton, Rabinowitz & Alschuler, Inc. (HR & A)

2006 2005-2035 Airport Economic Analysis. Prepared for San Diego County Regional Airport Authority. May. Available at: http://www.san.org/documents/assp/HRA_Economic_Impact_Report.pdf.

Health Effects Institute

2007 Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. Available at: http://pubs.healtheffects.org/view.php?id=282

HELIX Environmental Planning, Inc. (HELIX)

2010a Tier II Visual Impact Assessment for State Route 11 and the Otay Mesa East Port of Entry. August.
2010b Tier II Noise Study Report for State Route 11 and the Otay Mesa East Port of Entry. July.
2010c State Route 11 Noise Abatement Decision Report. July.
2010d Tier II Natural Environment Study for State Route 11 and Otay Mesa East Port of Entry. August.
2009a Biological Technical Report for Lonestar Industrial Park. May 22.
2009b Jurisdictional Delineation Report for State Route 11 and Otay Mesa East Port of Entry. December.
2009c 2009 Report U.S. Fish and Wildlife Service Protocol Level Presence/Absence Survey for the Quino Checkerspot Butterfly (*Euphydryas editha quino*). Lonestar Ridge. Prepared for McMillin Companies. May 15.
1999a Water Quality/Erosion Technical Report, Route 905 EIS/EIR. February.
1999b Biological Resources Technical Report, State Route 905. April.
1997 Biological constraints letter to Scott Anderson. August 12.

HELIX/CIC Research

2010 SR-11 and Otay Mesa POE Tier II Community Impact Assessment. September.

Holland, R.F.

1986 Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency.

ICF Consulting

2003 Environmental Justice in Transportation Planning and Investments Desk Guide. January.

Instituto Municipal de Planeación (IMPlan)
2005 Programa Parcial de Mejoramiento de la Mesa de Otay Este. August.

International Code Council (ICC)
2006 International Building Code (IBC).

Jackson, L.
1985 Ecological origins of California's Mediterranean grasses. *Journal of Biogeography* 12: 349-361.

Johnson, Wayne; San Diego Medical Services Enterprise
2007 Personal communication with K. Brandt; HELIX Environmental, Inc.; October 5.

Joint Working Group
2004 Binational Border Transportation Infrastructure Needs Assessment Study. July.

KOA Corporation
2009 San Ysidro Land Port of Entry Expansion Mobility Study. July 31.

Kyle Consulting
2007 First Addendum Archaeological Survey for State Route 11 and the East Otay Mesa Port of Entry. October.
2001 Cultural Resource Survey and Extended Phase 1 Test Program. March.

Mays, Jody
2010 Personal communication between Ms. Jody Mays of the San Diego County Sheriff's Department and Ms. Sarah Palmer of HELIX. July 20.

Metropolitan Transit Service (MTS)
2009 Bus Maps and Timetables. Available at: http://www.sdmts.com/Bus/Bus.asp.

Metropolitan Water District of Southern California (MWD)
2005 The Regional Urban Water Management Plan (RUWMP). November.

Montgomery Watson
1995 Water Resources Master Plan.

Municipality of Tijuana and the Secretariat of Social Development
2002 Estado de Integración Vial Para El Puerto Fronterizo Otay Este II, En La Ciudad de Tijuana, B.C.

National Audubon Society
2005 California Gnatcatcher. Available at: http://audubon2.org/webapp/watchlist/viewSpecies.jsp?id=57.

National Oceanic and Atmospheric Administration
2007 San Diego Climate. Available at: http://www.noaa.gov/wx.html.

Natural Resources Conservation Service

2009 Noxious Weed List. Available at: http://plants.usda.gov/java/noxious?rptType=State&statefips=06.

2007 Farmland Conversion Impact Rating For Corridor Type Projects. October 3.

1992 Hydric Soil Lists. Field Office Official List of Hydric Soils Map Units for San Diego Area, California. Section II Field Office Technical Guide. Davis, CA.

Ninyo & Moore

2010 Soil Sampling Report, Auto Salvage Yard, Proposed SR-11 Alignment, APN 648-070-13, San Diego, California. February 5.

2009 Initial Site Assessment, State Route 11 and Otay Mesa East Port of Entry, San Diego, California. October 30.

2007a Preliminary Geotechnical Study, Caltrans/SR-11, San Diego, California. November 21.

2007b Draft Hazardous Materials and Hazardous Waste Initial Site assessment, Caltrans/SR-11, San Diego, California. March 14.

2000 Final Report, Hazardous Materials Initial Site Assessment, State Route 11, San Diego, California. June 22.

1999a Route 905 EIS/EIR Technical Report, Geological Reconnaissance and Limited Geotechnical Evaluation, California Department of Transportation District 11. February.

1999b State Route 905 EIR/EIS Technical Report, Hazardous Materials Initial Site Assessment, San Diego, California. May.

1996a Hazardous Materials Initial Site Assessment, Otay Mesa Road Widening, San Diego, California. May, 16.

1996b Hazardous Waste Site Assessment, Otay Mesa Road Widening, San Diego, California. November 12.

Oberbauer, T.

1991 Comparison of Pre-European and 1988 vegetation coverage for San Diego County. *In*: Abbot, P. and B. Elliot. *Geological Society of North America*, Southern California Region, Symposium. Oct. 21-24, 1991, San Diego, California.

Ogden Environmental and Energy Services Co., Inc. (Ogden)

1993 East Otay Mesa Specific Plan Draft Environmental Impact Report (GPA 94-02; Log No. 93-19-6). Prepared for County of San Diego Department of Planning and Land Use. October.

O'Leary, J.

1990 Californian coastal sage scrub: General characteristics and considerations for biological conservation. *Endangered Plant Communities of Southern California*. Ed. A. Schoenherr. Proceedings of the 15th Annual Symposium. Southern California Botanists. Special Publication 3, pp. 24-41.

Otay Mesa Chamber of Commerce

2007 Otay Mesa Real Estate. Available at: http://www.otaymesa.org/realestate.html.

1984 Code of Ordinances. Available at: http://www.otaywater.gov/owd/pages/board/CodeOrdBook.pdf.

Otay Water District (OWD)

2005 Water Conservation and Recycling Update 1st Quarter Fiscal Year 2005-2006. Available at: http://www.otaywater.gov/owd/pages/waterconservation/1Q2006WC%20RecyclingReport.pdf.

1984 Otay Water District Code of Ordinances. Available at: http://www.otaywater.gov/owd/pages/board/CodeOrdBook.pdf.

Parker, Octavia

2006 San Diego County Sheriff Letter to Nick Larkin of EDAW, Inc. re: Otay Ranch and Resort PEIR. June 20.

PBS&J

2006 East Otay Mesa Sewer Master Plan Update. November.

Pollak, D.

2001 The future of habitat conservation: The NCCP experience in Southern California. A report to the California Research Bureau, California State Library.

Property Tax Services

2007 Property Valuations, Tax Rates and Useful Information for Taxpayers for Fiscal Year Ending June 30, 2007. Available at: http://www.sdcounty.ca.gov/pts/newyear/trb.html#annualreport.

RECON

1997 Dennery Canyon Vernal Pool, Coastal Sage Scrub, and Mule Fat Scrub Restoration and Preservation Plan.

Reiser, C

2001 Rare Plants of San Diego County. Aquafir Press. July.

Regional Economic Prosperity Strategy (REPS)

2007 Preparing for Regional and Global Collaboration. May.

San Diego Air Pollution Control District (APCD)

2009 2008 Annual Report.

2007 State Implementation Plan

San Diego Association of Governments (SANDAG)

2008 Regional Transportation Improvement Program. Adopted by SANDAG on July 25; approved by FHWA on November 17.

2007a 2030 San Diego Regional Transportation Plan: Final. November.

2007b Economic Impacts of Wait Times in the San Diego – Baja California Border Region: Fact Sheet. April.

2007c Binational Mitigation – Memo to Caltrans East Otay Mesa Port of Entry/State Route 11 Interagency Working Group from Ron Saenz, SANDAG. March 15.

2007d Final Otay Mesa/Mesa de Otay Binational Corridor Strategic Plan. July.

2006a INFO, San Diego Region Demographic and Economic Characteristics. June.

2006c Profile Warehouse.

2005 Cross Border Collaborative Planning in Otay Mesa. October 3 and 11.

2004 Regional Comprehensive Plan (RCP).

SANDAG/Caltrans
2009 Project Coordination Groups and Organizations
2006a State Route 11 Toll Road and East Otay Mesa Port of Entry: Financial Feasibility Study: Final Report. December 21.
2006b Economic Impacts of Wait Times at the San Diego – Baja California Border. January.
2000 Feasibility of Opening an International Border Crossing at Jacumba Jacume.

San Diego County Water Authority (SDCWA)
1997 San Diego County Water Authority Groundwater Report. June.

San Diego Daily Transcript
2007 *Otay Mesa*. Available at: http://www.sddt.com/Community/cityinfo_visitor.cfm?Com_ID=49&Cat_ID=5.

San Diego Medical Services Enterprise
2007 Personal communication between Mr. Wayne Johnson of San Diego Medical Services Enterprise and Ms. Karen Brandt of HELIX Environmental Planning, Inc. October 5.

San Diego Natural History Museum (SDNHM)
2009 Paleontological Resource Assessment; State Route 11/Otay Mesa East Port of Entry; San Diego County, California. June 24.

San Diego Regional Water Quality Control Board (RWQCB)
2002 2002 Biological Assessment Report.
2001 2001 Biological Assessment Report.
1999 1999 Biological Assessment Annual Report.
1994 The Water Quality Control Plan for the San Diego Basin, Region 9 (Basin Plan). September 4, as amended.

San Diego Workforce Partnership
2007 Occupational Outlook Report, The 2007 Economic Outlook for San Diego County. Available at: http://www.sandiegoatwork.com/oor2007/en/moreinformation/5.htm.

Scientific Resources Associated
2010 Air Quality Analysis for State Route 11 and the Otay Mesa East Port of Entry. August.

Scott, Thomas
2001 Understanding the Plants and Animals of the Western Riverside County Multiple Species Habitat Conservation Plan. Available at: http://ecoregion.ucr.edu/full.asp?sp_num=9.

Secretaría de Comunicaciones y Transportes
2007 Elaboración del Plan Maestro Conceptual Estudios de Costo – Beneficio y Factibilidad Financiera para el Nuevo Cruce Internacional Mesa de Otay II, en el Estado de Baja California. December.
2002 Análisis de las Necesidades de Ampliación de la Capacidad de la Infraestructura de Transporte en los Puertos Fronterizos de Carga de Tijuana, B.C. October.

Sierra Club, The
2004 Highway Health Hazards.

Simovich, M.
1990 Sensitive faunal elements of the vernal pools of Otay Ranch. A report to Michael Brandman and Associates. Prepared by Biology Department, University of San Diego. May 16.

South Coast Air Quality Management District
2000 Multiple Air Toxic Exposure Study-II.

State Historical Preservation Officer (SHPO)
2008 11-SD-11 PM 0.0/2.7 EA 056300 Determination of Eligibility and Affect for the State Route 11 Project, San Diego County, California. April 24.

State of California
2007 California Health and Safety Code. Available at: http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc&codebody=&hits=20.

State Surface Water Ambient Monitoring Program (SWAMP)
2008 Surface Water Ambient Monitoring Program (SWAMP) Report on the Tijuana Hydrologic Unit. January.

State Water Resources Control Board (SWRCB)
2007 2006 CWA Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, San Diego RWQCB. Approved by the USEPA on June 28. Available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r9_06_303d_reqtmdls.pdf. November 19.

Sutherlin Consulting Service
1999 State Route 905 EIS/EIR Technical Report, Hydrology/Hydraulics Preliminary Off-site Analysis. June.

Tan, S.S.
1995 Landslide Hazards in the Southern Part of the San Diego Metropolitan Area, San Diego County, California. California Division of Mines and Geology, Open-File Report 95-0.

Tan, S.S. and M.P. Kennedy
2002 Preliminary geologic map of the Otay Mesa 7.5' Quadrangle, San Diego County, California. California Geological Survey, scale 1:24,000.

Transportation Research Board, National Research Council
2000 Highway Capacity Manual.

Unitt, P.
2004 San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History. No. 39. October 31.

University of California Davis
2007 CT-EMFAC: A Computer Model to Estimate Transportation Project Emissions. December 10.
1997 Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol.

University of California, San Diego
2007 The Weather Page. Available at: http://meteora.ucsd.edu/weather.html.

URS
2005 Natural Environment Study, State Route 11, East Otay Mesa, California. November 3.

U.S. Army Corps of Engineers (USACE)
1997 Special Public Notice: Regional General Conditions to the Nationwide Permits. November 25.

U.S. Department of Commerce, Bureau of the Census
2008 National Population Projections. August 14.
2004 American Community Survey.
2000 Census of Population and Housing.

U.S. Department of Defense (DoD)
2003 DoD Unified Facilities Criteria (UFC) Minimum Antiterrorism Standards for Buildings (Manual UFC 4-010-01). October 8.

U.S. Department of Health and Human Services
2000 Poverty guidelines by area.

U.S. Department of Energy – Energy Information Administration
2007 Petroleum Consumption Data Profile. Available at: http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA#Datum.

U.S. Department of Transportation; Bureau of Transportation Statistics
2009 Border Crossing Statistics.
2008 Conformity Determination for SANDAG's 2008 RTIP. Available at: http://www.sandag.org/uploads/projectid/projectid_254_8966.pdf.
2007a U.S. Surface Trade with Canada and Mexico. Available at: http://www.bts.gov/publications/white_house_economic_statistics_briefing_room/august_2007/html/us_surface_trade_with_canada_mexico.html.
2007b Transborder Surface Freight Data.

U.S. Environmental Protection Agency (EPA)
2009a Truck Stop Electrification and Anti-idling as a Diesel Emissions Reduction Strategy at U.S.-Mexico Ports of Entry. Available at: http://www.epa.gov/region09/climatechange/pdfs/TSE_Otay_report.pdf. February 15.
2009b Monitor Values Report – Criteria Air Pollutants.
2009c IRIS database. Available at: http://www.epa.gov/iris.
2008a EMFAC2007 model.
2008b Federal Register Notice, FR73, Vol. 13, pp 3464-3467. January 18.
2007a Resource Conservation and Recovery Act (RCRA) Requirements. Available at: http://www.epa.gov/epaoswer/general/orientat.
2007b Polycyclic organic matter (POM). Available at: http://www.epa.gov/ttn/atw/hlthef/polycycl.html.

U.S. Environmental Protection Agency (EPA) (cont.)
1999 Preliminary Data Summary of Urban Storm Water Best Management Practices. August.
1995 Unpublished water quality data from the USEPA STORET Database. May 8 and 30.
1994 Executive Order 12898, 59 Federal Register 7629, *Federal Action to Address Environmental Justice in Minority Populations and Low Income Populations*. Vol. 59, No. 32. February.

U.S. Fish and Wildlife Service (USFWS)
2006 Letter to HELIX Environmental Planning, Inc. in response to Request for Candidate, Proposed, Threatened or Endangered Species for the Proposed State Route 11 and East Otay Mesa Port-of-Entry Project, San Diego County, California. October 6.
2004 Biological Opinion for the State Route 905 Extension Project, San Diego County, California. July 12.

U.S. Geological Survey (USGS)
1985 Evaluation of the Mission, Santee, and Tijuana Hydrologic Subareas for Reclaimed Water Use, San Diego County, California. *Water Resources Investigations Report 85-4032*.

U.S. National Park Service
2009 Register of National Natural Landmarks. Available at: http://www.nature.nps.gov/nnl/registry/usa_map/States/California/california.cfm. November 9.

U.S. Soil Conservation Service (SCS)
1973 Soil Survey. San Diego Area, California. December.

VRPA Technologies (VRPA)
2010a State Route 11/Otay Mesa East Land Use Port of Entry Tier II Traffic Technical Report. November 5.
2010b Memorandum for SR-11/Siempre Viva Road Design Variation. April 16.
2010c Memorandum for SR-11/Siempre Viva Road Design Variation – Queuing Analysis. April 22.

Walawender, M.J.
2000 The Peninsular Ranges: A Geological Guide to San Diego's Back Country.

Weather.com
2009 Monthly Average Weather Data for San Diego, California (92154). Available at: http://www.weather.com/outlook/events/weddings/wxclimatology/monthly/graph/92154?from=36hr_bottomnav_wedding. November 17.

Weston Solutions, Inc (Weston)
2009 San Diego County Municipal Copermittees, 2007-2008 Urban Runoff Monitoring, Final Report. January 27.
2007 San Diego County Municipal Copermittees, 2005-2006 Urban Runoff Monitoring, Final Report. January.

Zedler, P.H.
1987 The Ecology of Southern California Vernal Pools: A Community Profile. *U.S. Fish and Wildlife Service Biological Report 85.* 136 pp.


# Appendices

# APPENDIX A

PRESIDENTIAL PERMIT

# PRESIDENTIAL PERMIT

Authorizing the General Services Administration
to Construct, Operate, and Maintain
a Vehicular and Pedestrian Border Crossing
Called "Otay Mesa East"
near San Diego, California,
at the International Boundary between the United States and Mexico

By virtue of the authority vested in me as Deputy Secretary of State under Executive Order 11423, 33 FR 11741 (1963), as amended by Executive Order 12847 of May 17, 1993, 58 FR 29511 (1993), Executive Order 13284 of January 23, 2003, 68 FR 4075 (2003), and Executive Order 13337 of April 30, 2004, 69 FR 25299 (2004) and Department of State Delegation of Authority 245 of April 23, 2001; having considered the environmental effects of the proposed action in accordance with the National Environmental Policy Act of 1969, as amended (83 Stat. 852, 42 U.S.C. 4321 *et seq.*) and other statutes relating to environmental concerns; having considered the proposed action in accordance with the National Historic Preservation Act of 1966, as amended (80 Stat. 917, 16 U.S.C. 470f *et seq.*); and having requested and received the views of various of the federal departments and other interested persons; I hereby grant permission, subject to the conditions herein set forth, to the United States General Services Administration (GSA) (hereinafter referred to as the "permittee"), to construct, operate, and maintain a new commercial vehicle, passenger vehicle, and pedestrian land border crossing (hereinafter referred to as "Otay Mesa East"), approximately two miles east of the existing Otay Mesa border crossing near San Diego, California.

* * * * *

The term "facilities" as used in this permit means the facilities proposed to be constructed at the Otay Mesa East border crossing near San Diego, California. These facilities are likely to consist of the following improvements and structures:

- Inspection and X-Ray Facilities

- Containment Areas and Docks
- Commercial Inspection Building with Import and Export Docks
- Export Inspection
- Main Administrative Building with Pedestrian Facilities
- Entry and Exit Control Booths and related improvements
- Roadways and related Infrastructure, Pathways, Parking Lots, and related Lots
- Landscaping
- Ancillary Support Facilities
- Commercial Cargo and Passenger Vehicle lanes
- Related Improvements and Infrastructure

The term "Tier 1 environmental document" as used in this permit refers to the programmatic or first tier environmental impact statement that establishes the preferred corridor of State Route 11 and the preferred site of the Otay Mesa East border crossing.

The term "Tier 2 environmental document" as used in this permit refers to the second tier environmental impact statement or environmental assessment to be prepared after the issuance of this permit and before any construction may begin that will identify more detailed project-specific effects and mitigation measures.

This permit is subject to the following conditions:

Article 1. The facilities herein described, and all aspects of their operation, shall be subject to all the conditions, provisions and requirements of this permit and any amendment thereof. This permit may be terminated upon a determination of the Executive Branch that the Otay Mesa East border crossing shall be closed. This permit may be amended by the Secretary of State or the Secretary's delegate in consultation with the permittee and, as appropriate, other Executive Branch agencies; the permittee's obligation to implement such an amendment is subject to the availability of funds. The permittee shall make no substantial change in the location of the facilities or in the operation authorized by this permit until such changes have been approved by the Secretary of State or the Secretary's delegate.

Article 2. The permittee shall comply with all applicable federal laws and regulations regarding the construction, operation, and maintenance of the facilities. Further, the permittee shall comply with nationally recognized codes to the extent required under 40 U.S.C. 3312(b). The permittee shall cooperate with state and local officials to the extent required under 40 U.S.C. 3312(d).

Article 3. In the event that the Otay Mesa East border crossing is permanently closed and is no longer used as an international crossing, this permit shall terminate and the permittee may manage, utilize, or dispose of the facilities in accordance with its statutory authorities.

Article 4. As authorized by applicable federal laws and regulations, the permittee is a federal agency that is responsible for managing and operating the existing Otay Mesa border crossing and, upon acceptance of the facilities by the United States of America, the Otay Mesa East border crossing. This permit shall continue in full force and effect for only so long as the permittee shall continue the operations hereby authorized.

Article 5. This Article applies to transfer of the facilities or any part thereof as an operating land border crossing. The permittee shall immediately notify the United States Department of State ("Department") of any decision to transfer custody and control of the facilities or any part thereof to any other agency or department of the United States Government. Said notice shall identify the transferee agency or department and seek the approval of the Department for the transfer of the permit. In the event of approval by the Department of such transfer of custody and control to another agency or department of the United States Government, the permit shall remain in force and effect, and the facilities shall be subject to all the conditions, permissions and requirements of this permit and any amendments thereof. The permittee may transfer ownership or control of the facilities to a non-federal entity or individual only upon the prior express approval of such transfer by the Department, which approval may include such conditions, permissions and requirements that the Department, in its discretion, determines are appropriate and necessary for inclusion in the permit, to be effective on the date of transfer.

Article 6. (1) The permittee or its agent shall acquire such right-of-way grants or easements and permits as may become necessary and appropriate.

(2) The permittee shall maintain the facilities and every part thereof.

Article 7. (1) The permittee shall take, or cause to be taken, all appropriate measures to prevent or mitigate adverse environmental impacts or disruption of significant archeological resources in connection with the construction, operation, and maintenance of the facilities, including those mitigation measures identified in both the Tier 1 and Tier 2 environmental documents, but only to the extent

incorporated into either a Record of Decision (ROD) or Finding of No Significant Impact (FONSI) to be issued by the permittee regarding the Otay Mesa East border crossing. In preparing its ROD or FONSI, the permittee shall consult with appropriate officials of the Federal Highway Administration (FHWA) and the permittee shall consider the mitigation measures recommended in the FHWA ROD.

(2) The permittee may make no irreversible change to the physical environment based upon this permit until it has received approval from the Department to proceed with construction, as provided in Article 9.

(3) Before issuing, or causing the issuance of, the notice to proceed for construction, the permittee shall obtain the concurrence of the United States Section of the International Boundary and Water Commission.

Article 8. The permittee shall file any applicable statements and reports that might be required by applicable federal law in connection with this project.

Article 9. The permittee shall not issue, nor cause to be issued, a notice to proceed for construction work until the Department has provided notification to the permittee that: (1) the Department has concluded, based on its review of the Tier 1 and Tier 2 environmental documents and the permittee's ROD or FONSI, that the continuation of this permit is in the U.S. national interest; and (2) the Department has completed its exchange of diplomatic notes with the Government of Mexico regarding authorization of construction. If the Department concludes that the continuation of this permit is not in the national interest of the United States following its review of the environmental documents, including the permittee's ROD or FONSI, the Department shall revoke this permit. The permittee shall provide written notice to the Department at such time as the construction authorized by this permit commences, and again at such time as construction is completed, interrupted for more than ninety days or discontinued.

Article 10. This permit is not intended to, and does not, create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or in equity, by any party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, in their individual or official capacities, or any other person. The issuance of this permit does not create any obligation on the part of the permittee or the United States of America to construct, operate, maintain, or accept the donation of all or any portion of the Otay Mesa East border crossing;

provided, however, if the permittee does operate the facilities then it will do so in accordance with the terms and conditions of this permit.

Article 11. This permit shall expire ten years from the date of issuance in the event that the permittee neither has issued nor caused to be issued the notice to proceed for construction activities.

IN WITNESS WHEREOF, I, John D. Negroponte, Deputy Secretary of State, have hereunto set my hand this 20th day of November, 2008, in Washington, District of Columbia.

John Negroponte

John D. Negroponte
Deputy Secretary of State

# APPENDIX B

## DESIGN EXCEPTIONS

## Appendix B
## REQUIRED DESIGN EXCEPTIONS, BY ALTERNATIVE AND VARIATION

| | Reduced distance between interchanges[1] (HDM 501.3) | Ramp exit shoulder width[2] | 22-foot median (HDM 305.1[a]) | Branch connection detail (HDM 501.4[6]/504.3L) | Greater divergence angle at ramp exit (HDM 504.4[5]) | Weave length (HDM 504.7 or 504.5) | Shortening merge/auxiliary lane (HDM 504.4[6]) | Distance between successive exits (HDM 504.3[10]) | Reduced design speed (HDM 504.4[2]) | No passing lane provided (HDM 504.4[5]) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Two Interchange Alternative** | | | | | | | | | | |
| No Variation | 1) SR-125/SR-11 IC to La Media Road IC<br><br>2) SR-125/SR-11 IC to Enrico Fermi Drive IC | N/A | Sanyo Avenue area | SR-905 ramps to SR-11 (EB and WB) | N/A | N/A | 1) SB (EB) SR-905 to SB (EB) SR-11 direct connector<br><br>2) NB (WB) SR-11 to NB (WB) SR-905 direct connector. Also, maximum profile grade may exceed 6 percent (HDM 504.4[3]) | NB SR-125 off ramp and La Media Road off ramp from NB SR-905 | N/A | N/A |
| With SR-125 Connector Variation | ✓ | N/A | ✓ | ✓ | SB SR-125 to SB (EB) SR-11 "flyover" connector | N/A | ✓ | ✓ | N/A | N/A |
| With SR-905/SR-125/SR-11 Full Interchange Variation | ✓ | 1) WB (NB) SR-11 to SB SR-905<br><br>2) NB SR-905 to EB (SB) SR-11 | ✓ | ✓ | 1) SB SR-125 to SB (EB) SR-11 "flyover" connector<br><br>2) WB (NB) SR-11 to SB SR-905<br><br>3) NB SR-905 to EB (SB) SR-11 | WB SR-11 to EB (SB) SR-905 and Siempre Viva Road off ramp[3] | La Media Road off ramp from WB (NB) SR-11 profile grade exceeds 8% | ✓ | NB SR-905 to EB (SB) SR-11 | NB SR-905 to EB (SB) SR-11 |
| With 46-foot Median | ✓ | N/A | N/A | ✓ | N/A | N/A | ✓ | ✓ | N/A | N/A |
| With Siempre Viva Road Full Interchange Variation | ✓ | N/A | ✓ | ✓ | N/A | Enrico Fermi Drive on-ramp to Siempre Viva off ramp<br><br>+ Enrico Fermi Drive on-ramp to Passenger and Commercial ramps to POE | ✓ | Siempre Viva Road on-ramp to Passenger and Commercial ramps to POE<br><br>Enrico Fermi Drive on-ramp to Passenger and Commercial ramps to POE<br><br>Enrico Fermi Drive on-ramp to Siempre Viva Road ramps | N/A | N/A |
| **One Interchange Alternative** | | | | | | | | | | |
| No Variation | 1) SR-125/SR-11 IC to La Media Road IC<br><br>2) SR-125/SR-11 IC to Alta Road IC | N/A | Sanyo Avenue area | SR-905 ramps to SR-11 (EB and WB) | N/A | Alta Road IC to Passenger ramp to POE | 1) SB (EB) SR-905 to SB (EB) SR-11 direct connector<br><br>2) NB (WB) SR-11 to NB (WB) SR-905 direct connector. Also, maximum profile grade may exceed 6 percent | NB SR-125 off ramp and La Media Road off ramp from NB SR-905 | N/A | N/A |
| With SR-125 Connector Variation | ✓ | N/A | ✓ | ✓ | SB SR-125 to SB (EB) SR-11 "flyover" connector | ✓ | ✓ | ✓ | N/A | N/A |
| With SR-905/SR-125/SR-11 Full Interchange Variation | ✓ | 1) WB (NB) SR-11 to SB SR-905<br><br>2) NB SR-905 to EB (SB) SR-11 | ✓ | ✓ | 1) SB SR-125 to SB (EB) SR-11 "flyover" connector<br><br>2) WB (NB) SR-11 to SB SR-905<br><br>3) NB SR-905 to EB (SB) SR-11 | WB SR-11 to EB (SB) SR-905 and Siempre Viva Road off ramp[3] | La Media Road off ramp from WB (NB) SR-11 profile grade exceeds 8% | ✓ | NB SR-905 to EB (SB) SR-11 | NB SR-905 to EB (SB) SR-11 |
| With 46-foot Median | ✓ | N/A | N/A | ✓ | N/A | ✓ | ✓ | ✓ | N/A | N/A |

## Appendix B (cont.)
## REQUIRED DESIGN EXCEPTIONS, BY ALTERNATIVE AND VARIATION

| | Reduced distance between interchanges[1] (HDM 501.3) | Ramp exit shoulder width[2] | 22-foot median (HDM 305.1[a]) | Branch connection detail (HDM 501.4[6]/504.3L) | Greater divergence angle at ramp exit (HDM 504.4[5]) | Weave length (HDM 504.7 or 504.5) | Shortening merge/auxiliary lane (HDM 504.4[6]) | Distance between successive exits (HDM 504.3[10]) | Reduced design speed (HDM 504.4[2]) | No passing lane provided (HDM 504.4[5]) |
|---|---|---|---|---|---|---|---|---|---|---|
| **No Interchange Alternative** | | | | | | | | | | |
| No Variation | 1) Between SR-125/SR-11 IC and La Media Road IC | N/A | Sanyo Avenue area | SR-905 ramps to SR-11 (EB and WB) | N/A | N/A | 1) SB (EB) SR-905 to SB (EB) SR-11 direct connector<br><br>2) NB (WB) SR-11 to NB (WB) SR-905 direct connector. Also, maximum profile grade may exceed 6 percent | NB SR-125 and EB (NB) SR-905 exit to La Media | N/A | N/A |
| With SR-125 Connector Variation | ✓ | N/A | ✓ | ✓ | SB SR-125 to SB (EB) SR-11 "flyover" connector | N/A | ✓ | ✓ | N/A | N/A |
| With SR-905/SR-125/SR-11 Full Interchange Variation | ✓ | 1) WB (NB) SR-11 to SB SR-905<br><br>2) NB SR-905 to EB (SB) SR-11 | ✓ | ✓ | SB SR-125 to SB (EB) SR-11 "flyover" connector | WB SR-11 to EB (SB) SR-905 and Siempre Viva Road off ramp[3] | La Media Road exit from WB (NB) SR-11 profile grade exceeds 8% | ✓ | NB SR-905 to EB (SB) SR-11 | NB SR-905 to EB (SB) SR-11 |
| With 46-foot Median | ✓ | N/A | N/A | ✓ | N/A | N/A | ✓ | ✓ | N/A | N/A |

[1] Refers to the reduced standard distance between a freeway-to-freeway interchange (SR-905/SR-125/SR-11) and an interchange with a local road (Enrico Fermi Drive for the Two Interchange Alternative, Alta Road for the One Interchange Alternative, and La Media Road for all alternatives).
[2] Refers to the shoulder width on a freeway-to-freeway exit ramp.
HDM xxx = Highway Design Manual section number; IC = interchange; EB = eastbound; WB = westbound; NB = northbound; SB = southbound; ✓ = As described for the alternative with no variation; N/A = Not Applicable
Shaded area = Mandatory Design Exception; Unshaded area = Advisory Design Exception
[3] Refers to no auxiliary lane between ramps. Siempre Viva Road exit is a future off ramp from SB SR-125.

# APPENDIX C

## LIST OF TECHNICAL STUDIES

## LIST OF TECHNICAL STUDIES

The following technical studies were prepared to support this EIR/EIS. These technical studies are available for review at Caltrans District 11 offices at 4050 Taylor Street, Building 1 – Main Lobby, San Diego, CA 92110, and at the Imperial Beach, Bonita-Sunnyside and Otay Mesa-Nestor branches of the San Diego County Library.

Community Impact Assessment for State Route 11 and the Otay Mesa East Port of Entry. September 2010

State Route 11/Otay Mesa East Land Use Port of Entry Tier II Traffic Technical Report. December 15, 2009

Preliminary Transportation Management Plan Report. June 22, 2009

SR-11/Otay Mesa East LPOE Traffic Analysis, SR-11/Siempre Viva Road Design Variation. April 16, 2010

SR-11/Otay Mesa East LPOE Traffic Analysis, SR-11/Siempre Viva Road Design Variation – Queuing Analysis. April 22, 2010

Visual Impact Assessment for State Route 11 and the Otay Mesa East Port of Entry. August 2010

First Supplemental Historic Property Survey Report for State Route 11 and East Otay Mesa Port of Entry. 2009 (Confidential)

Second Supplemental Historic Property Survey Report for State Route 11 and East Otay Mesa Port of Entry. 2010 (Confidential)

Hydrology & Hydraulics Report, State Route 11 Corridor and Commercial Vehicle Enforcement Facility. April 14, 2010

Preliminary Hydrology & Hydraulics Report, State Route 11 - Port of Entry (POE). April 14, 2010

Addendum to: Hydrology & Hydraulics Report, State Route 11 Corridor and Commercial Vehicle Enforcement Facility. August 9, 2010

State Route 11, Commercial Vehicle Enforcement Facility & Otay Mesa East Port of Entry Water Quality Report. August 2010

Initial Site Assessment, State Route 11 and Otay Mesa East Port of Entry, San Diego, California. October 30 2009

Proposed State Route 11 Extension: Supplementary District Preliminary Geotechnical Report. October 7, 2009

Paleontological Resource Assessment; State Route 11/Otay Mesa East Port of Entry; San Diego County, California. June 24, 2009

Paleontological Update for the State Route 11/Otay Mesa East Port of Entry Project. January 21, 2010

Soil Sampling Report, Auto Salvage Yard, Proposed SR-11 Alignment, APN 648-070-13, San Diego, California. 2010

Air Quality Analysis for State Route 11 and the Otay Mesa East Port of Entry. August 2010

Air Quality Technical Report for Construction Emissions for State Route 11 and the Otay Mesa East Port of Entry. July 2010.

Noise Study Report for State Route 11 and the Otay Mesa East Port of Entry. September 2010

Natural Environment Study for State Route 11 and the Otay Mesa East Port of Entry. August 2010

The technical studies below were prepared in support of the Program EIR/Phase I EIS, which has been incorporated by reference.

Supplemental Historic Property Survey Report for State Route 11 and East Otay Mesa Port of Entry. 2008 (Confidential)

First Addendum Archaeological Survey Report for the Future State Route 11 and East Otay Mesa Port of Entry Project. October 2007

Cultural Resource Survey and Extended Phase 1 Testing Program or the Future State Route 11 and East Otay Mesa Port of Entry Project. March 2001

Biological Resources Existing Conditions Report for State Route 11 and the Otay Mesa East Port of Entry. December 2007

Community Assessment Existing Conditions Report for State Route 11 and the Otay Mesa East Port of Entry. January 2008

Hazardous Materials and Hazardous Waste Initial Site Assessment for State Route 11 and the Otay Mesa East Port of Entry. March 2007

Preliminary Existing Conditions Hydrology Calculations for State Route 11 Programmatic EIR/EIS. November 2007

Preliminary Geotechnical Study, Caltrans/SR-11, San Diego, California. November 21, 2007

State Route 11 Phase I Traffic Technical Report. December 20 2007

# APPENDIX D

## RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F)

# Appendix D:
# Resources Evaluated Relative to the Requirements of Section 4(f) for the State Route 11/Otay Mesa East Port of Entry Project San Diego, California

## INTRODUCTION

The following discusses existing and planned properties adjacent to the proposed State Route 11 (SR-11)/Otay Mesa East Port of Entry (POE) Project that may warrant protection under Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966. The discussion is prepared in support of the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) being prepared for the proposed project. Figure 1 shows the location of the potential 4(f) resource evaluated in this document.

Section 4(f) of the USDOT Act of 1996, codified in federal law as 49 U.S.C. 303, declares that "[it] is the policy of the United Sates Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that "the Secretary [of Transportation] may approve a transportation program or project…requiring the use of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge of national, State or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State or local officials having jurisdiction over the park, area, refuge, or site) only if:

(1) there is no prudent and feasible alternative to using that land; and
(2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use.

Section 4(f) also requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and Housing and Development in developing transportation projects and programs that use lands protected by Section 4(f). Reviews by these Departments are not required for Programmatic 4(f) Evaluations or *de minimis* findings.

### *Concurrence on Proposed Section 4(f) De Minimis Use*

SAFETEA-LU Section 6009(a) amends existing Section 4(f) legislation to allow the USDOT to determine that certain uses of a Section 4(f) land would have no adverse effect on the protected resource. Such *de minimis* impacts on publicly owned parks; recreational areas of national, state or local significance; wildlife or waterfowl refuges; or lands from a historic site of national, state or local significance are defined as those that do not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f) (49 USC 303[d]; 23 USC 138[d]). When FHWA proposes to make a *de minimis* impact finding, it must provide an opportunity for public comment on the proposed finding (currently this is included in the public comment period for the SR-11/Otay Mesa POE Project Draft Tier II EIR/EIS). In addition, the official(s) with jurisdiction over the Section 4(f) resource in question must: a) with regard to historic properties, concur, in writing, with FHWA's proposed finding of 'no adverse effect' or 'no historic properties affected' in accordance with 36 CFR part 800; or b) in the case of parks, recreation areas, and wildlife and waterfowl refuges, concur in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection (23 CFR § 774.5[b]).

## I. DISCUSSION OF PROPERTY

Field reconnaissance, reviews of applicable local plans, and Google Earth were used to identify resources in the vicinity of the proposed project that could potentially be subject to evaluation under Section 4(f). One potential Section 4(f) resource exists adjacent to SR-905 which is currently being constructed. This property is shown on Figure 1.

**Table 1. Potential Section 4(f) Resources**

| Map ID | Resource | Jurisdiction | Distance to SR-905 Alignment (mi) |
|---|---|---|---|
| 1 | Southwestern College Higher Education Center | City of San Diego | 0.03 |

**Figure 1. Potential Section 4(f) Properties**

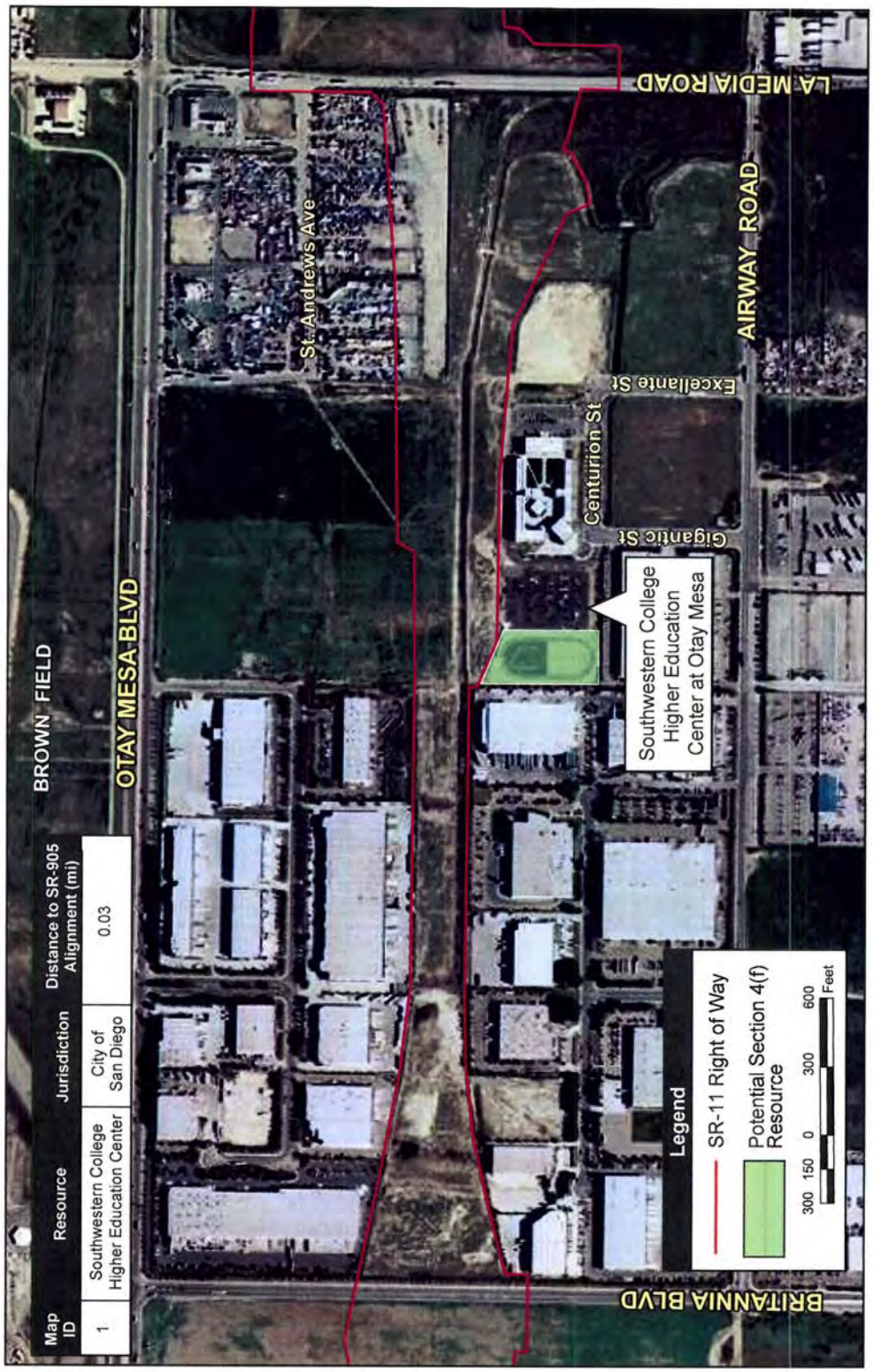



Figure 1
Potential Section 4 (f) Resources

## II. RESOURCES NOT PROTECTED BY SECTION 4(F)

The Southwestern College Higher Education Center is located in Otay Mesa between the Interstate 805 and the proposed SR-905/SR-125/SR-11 interchange. More specifically, it is situated between Britannia Boulevard and La Media Road 0.03 mile south of the future SR-905 alignment that is presently under construction. The facility opened in August 2007, and has the capacity to serve up to 5000 students. It offers over 170 different courses, and students can pursue an associate degree, complete general education requirements for transfer or develop occupational skills for employment. A variety of student services are available, including Admissions and Records, Financial Aid, Counseling and Tutoring, Science and Computer Labs, a fitness center, library and a bookstore. The fitness center (track and field) is located adjacent to the SR-905 alignment. The facility is only available for student/team use, and is not open to the public. Therefore, it does not qualify for protection under Section 4(f). Even if the facility was open to the public, no "use" and no "constructive use" would occur, because the proposed project would not permanently incorporate land from a Section 4(f) resource into a transportation facility. Additionally, the proximity impacts would not be so severe that the protected activities, features or attributes that qualify the resource for protection under Section 4(f) are "substantially impaired."

# APPENDIX E

FARMLAND CONVERSION IMPACT RATING FORM

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

# FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

| | | |
|---|---|---|
| **PART I** *(To be completed by Federal Agency)* | 3. Date of Land Evaluation Request **7/30/10** | 4. Sheet 1 of **1** |
| 1. Name of Project **SR 11/Otay Mesa East Port of Entry (POE)** | 5. Federal Agency Involved **Federal Highway Administration** | |
| 2. Type of Project **Highway Improvement Project and POE** | 6. County and State **San Diego, CA** | |

| | | |
|---|---|---|
| **PART II** *(To be completed by NRCS)* | 1. Date Request Received by NRCS **7/30/10** | 2. Person Completing Form **C. Calvert** |
| 3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐ | 4. Acres Irrigated **69,537** | Average Farm Size **80** |
| 5. Major Crop(s) **Avocados, Flowers, Wine Grapes, Citrus** | 6. Farmable Land in Government Jurisdiction Acres: **112,974** % **4** | 7. Amount of Farmland As Defined in FPPA Acres: **91,812** % **3** |
| 8. Name Of Land Evaluation System Used **CA - Storie System** | 9. Name of Local Site Assessment System **None** | 10. Date Land Evaluation Returned by NRCS **9/3/10** |

| **PART III** *(To be completed by Federal Agency)* | Alternative Corridor For Segment ____ Corridor A | Corridor B | Corridor C | Corridor D |
|---|---|---|---|---|
| A. Total Acres To Be Converted Directly | 345 | 319 | 298 | |
| B. Total Acres To Be Converted Indirectly, Or To Receive Services | 0 | 0 | 0 | |
| C. Total Acres In Corridor | 345 | 319 | 298 | 0 |
| **PART IV** *(To be completed by NRCS) Land Evaluation Information* | | | | |
| A. Total Acres Prime And Unique Farmland | 40 | 40 | 39 | |
| B. Total Acres Statewide And Local Important Farmland | 295 | 270 | 247 | |
| C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted | 0.3 | 0.3 | 0.3 | |
| D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value | | DATA NOT AVAILABLE | | |
| **PART V** *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)* | 42.2 | 42.4 | 42.6 | |

| **PART VI** *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* | Maximum Points | Corridor A | Corridor B | Corridor C | Corridor D |
|---|---|---|---|---|---|
| 1. Area in Nonurban Use | 15 | 7 | 7 | 7 | |
| 2. Perimeter in Nonurban Use | 10 | 10 | 10 | 10 | |
| 3. Percent Of Corridor Being Farmed | 20 | 0 | 0 | 0 | |
| 4. Protection Provided By State And Local Government | 20 | 0 | 0 | 0 | |
| 5. Size of Present Farm Unit Compared To Average | 10 | 0 | 0 | 0 | |
| 6. Creation Of Nonfarmable Farmland | 25 | 0 | 0 | 0 | |
| 7. Availablility Of Farm Support Services | 5 | 5 | 5 | 5 | |
| 8. On-Farm Investments | 20 | 0 | 0 | 0 | |
| 9. Effects Of Conversion On Farm Support Services | 25 | 0 | 0 | 0 | |
| 10. Compatibility With Existing Agricultural Use | 10 | 5 | 5 | 5 | |
| TOTAL CORRIDOR ASSESSMENT POINTS | 160 | 27 | 27 | 27 | 0 |
| **PART VII** *(To be completed by Federal Agency)* | | | | | |
| Relative Value Of Farmland (From Part V) | 100 | 42.2 | 42.4 | 42.6 | |
| Total Corridor Assessment (From Part VI above or a local site assessment) | 160 | 27 | 27 | 27 | 0 |
| **TOTAL POINTS** *(Total of above 2 lines)* | 260 | 69.2 | 69.4 | 69.6 | 0 |

| 1. Corridor Selected: | 2. Total Acres of Farmlands to be Converted by Project: | 3. Date Of Selection: | 4. Was A Local Site Assessment Used? |
|---|---|---|---|
| | | | YES ☐ NO ☑ |

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

# CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

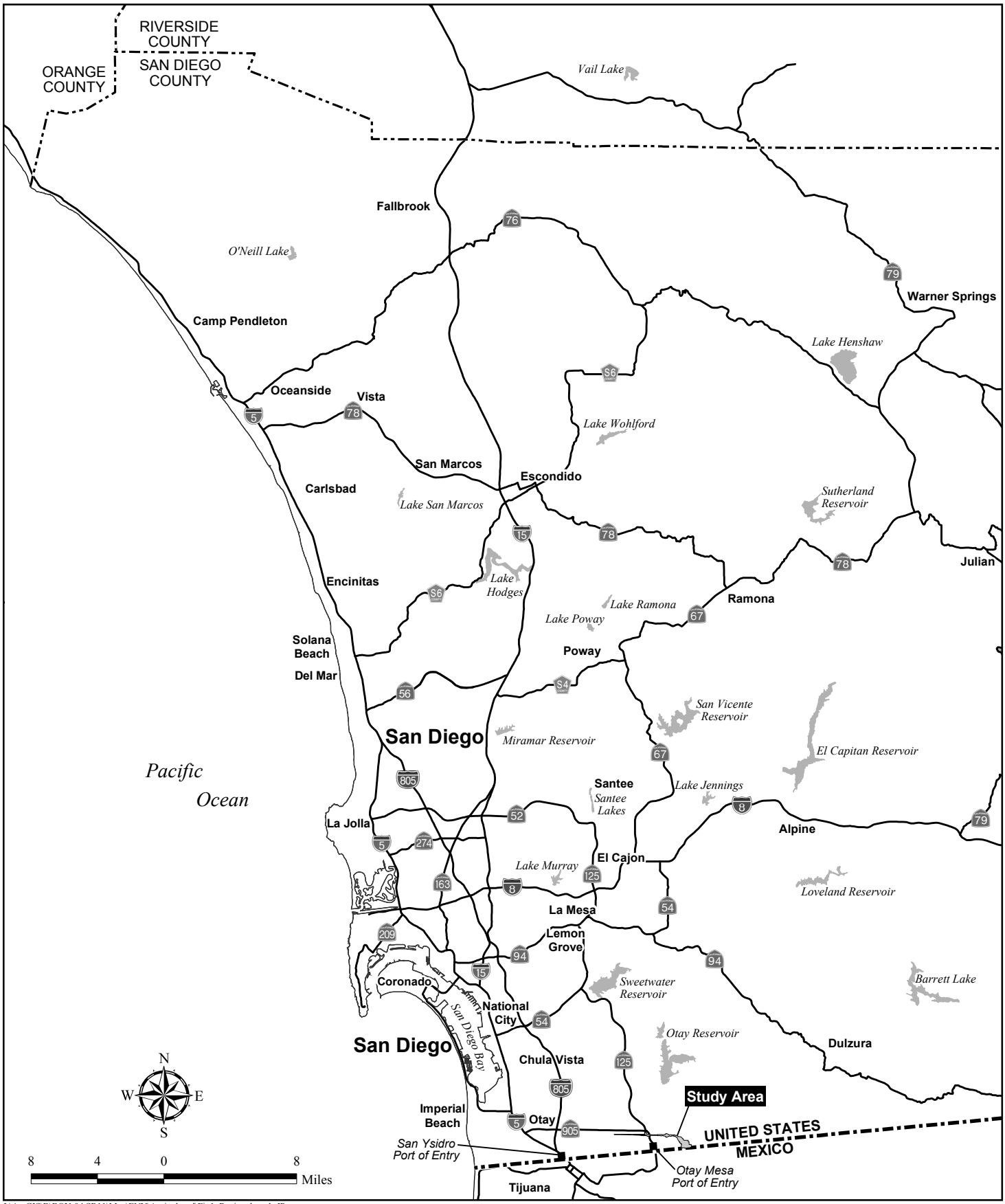
(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

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# Regional Location Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY

Figure 1


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# Two Interchange Alternative Extent of Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY

Figure 2


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# One Interchange Alternative Extent of Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY

Figure 3


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# No Interchange Alternative Extent of Impacts

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY

Figure 4

# APPENDIX F

CALTRANS RELOCATION ASSISTANCE PROGRAM

# RELOCATION ASSISTANCE INFORMATION

## I IMPORTANT RELOCATION ASSISTANCE INFORMATION

**The following explanation is general in nature and is not intended to be a complete statement of Federal and State relocation laws and regulations. Any questions concerning relocation should be addressed to Caltrans Right-of-Way.**

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the first written offer to purchase, owner-occupants are given a detailed explanation of the State's relocation services. Tenant occupants of properties to be acquired are contacted soon after the first written offer to purchase and also are given a detailed explanation of the Caltrans Relocation Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

## II RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use. Caltrans will assist displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe, and sanitary". Nonresidential displacees will receive information on comparable properties for lease or purchase. (For business, farm, and nonprofit organization relocation services, see Section IV.)

Residential replacement dwellings will be in equal or better neighborhoods at rents or prices within the financial ability of the individuals and families displaced and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning Federal- and State-assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days' written notice. Occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe, and sanitary" replacement residence, available on the market, is offered to them by Caltrans.

## III RESIDENTIAL RELOCATION PAYMENTS PROGRAM

The Relocation Payment Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of the replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

## Moving Costs

Any displaced person who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving-cost schedule.

## Purchase Supplement

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners, who have owned and occupied their property for 180 days or more prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment and may qualify to receive reimbursement for certain non-recurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is $22,500. If the total entitlement (without the moving payments) is in excess of $22,500, the Last Resort Housing Program will be used. (See the explanation of the Last Resort Housing Program below.)

## Rental Supplement

Tenants who have occupied the property to be acquired by Caltrans for 90 days or more and owner-occupants of 90-179 days prior to the date of the first written offer to purchase may qualify to receive a rental differential payment. This payment is made when Caltrans determines that the cost to rent a comparable "decent, safe, and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted below under the Down Payment section. The maximum amount payable to any tenant of 90 days or more and any owner-occupant of 90-179 days, in addition to moving expenses, is $5,250. If the total entitlement for rental supplement exceeds $5,250, the Last Resort Housing Program will be used.

In addition to the occupancy requirements in order to receive any relocation benefits, the displaced person must buy or rent and occupy a "decent, safe, and sanitary" replacement dwelling within one year from the date the department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

**Down Payment**

The down payment option has been designed to aid owner-occupants of 90-179 days and tenants with no less than 90 days of continuous occupancy prior to Caltrans first written offer. The down payment and incidental expenses cannot exceed the maximum payment of $5,250. The one-year eligibility period in which to purchase and occupy a "decent, safe, and sanitary" replacement dwelling will apply.

**Last Resort Housing**

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on Federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the $5,250 and $22,500 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances. In certain exceptional situations, Last Resort Housing may also be used for tenants of less than 90 days.

After the first written offer to acquire the property has been made, Caltrans will, within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Preferences in area of relocation;
- Number of people to be displaced and the distribution of adults and children according to age and sex;
- Location of school and employment;
- Specific arrangements needed to accommodate any family member(s) special needs; and
- Financial ability to relocate into comparable replacement dwelling that will adequately house all members of the family.

## IV THE NONRESIDENTIAL RELOCATION ASSISTANCE PROGRAM

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement property and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent suitable for the specific relocation needs of a particular business. The types of payments available to eligible businesses, farms, and nonprofit

organizations are moving and searching expenses and, possibly, re-establishment expenses or a fixed in lieu payment instead of any moving, searching, and re-establishment expenses. The payment types can be summarized as follows:

**Moving Expenses**

Moving expenses may include the following actual reasonable costs:

- The moving of inventory, machinery, equipment, and similar business-related property dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property;
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move; and
- Expenses related to searching for a new business site, up to $1,000 for reasonable expenses actually incurred.

**Re-establishment Expenses**

Re-establishment expenses related to the operation of the business at the new location, up to $10,000 for reasonable expenses actually incurred.

**Fixed In Lieu Payment**

A fixed payment in lieu of moving and searching payments and re-establishment payment may be available to businesses which meet certain eligibility requirements. This payment is an amount equal to the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $20,000.

## V ADDITIONAL INFORMATION

**Relocation Payments Not Income**

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or resources for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, local "Section 8" Housing programs, or other Federal assistance programs.

**Right to Appeal**

Any person, business, farm, or nonprofit organization which has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate, may appeal for a special hearing of their complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

# Your Rights and Benefits as a Displaced Business, Farm or Nonprofit Organization Under the Uniform Relocation Assistance Program

## Introduction

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.

Displaced businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

## Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 As Amended "The Uniform Act"

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their business, farm or nonprofit organization, by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

> To ensure that persons displaced as a direct result of federal or federally-assisted projects are treated fairly, consistently and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

*While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.*

## Relocation Services

The California Department of Transportation has two programs to aid businesses, farms and nonprofit organizations which must relocate.

These are:

1. The Relocation Advisory Assistance Program, which is to aid you in locating a suitable replacement property, and

2. The Relocation Payments Program, which is to reimburse you for certain costs involved in relocating. These payments are classified as:

    - Moving and Related Expenses (costs to move personal property not acquired).

    - Reestablishment Expenses (expenses related to the replacement property).

    - In-Lieu Payment (a fixed payment in lieu of moving and related expenses, and reestablishment expenses).

**NOTE:** *Payment of loss of goodwill is considered an acquisition cost. California law and the federal regulations mandate that relocation payments cannot duplicate other payments such as goodwill. You will* **not** *be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. You will also receive at least 90 days' written notice before you must move.*

## Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

***Business:*** Any lawful activity, with the exception of a farm operation, conducted primarily for the purchase, sale, lease and rental of personal or real property, or for the manufacture, processing, and/or marketing of products, commodities, or any other personal property, or for the sale of services to the public, or solely for the purpose of this Act, and outdoor advertising display or displays, when the display(s) must be moved as a result of the project.

***Displaced Person or Displacee:*** Any person who moves from real property or moves personal property from real property as a result of the acquisition of the real property, in whole or in part, or as the result of a written notice from the agency to vacate the real property needed for a transportation project. In the case of a partial acquisition, Caltrans shall determine if a person is displaced as a direct result of the acquisition.

Owners and tenants **not lawfully present** in the United States are not eligible to receive relocation payments and assistance.

***Contributes Materially:*** A business or farm operation must have had average annual gross receipts of at least $5,000 **or** average annual net earnings of at least $1,000, or their income must have contributed at least 33 1/3 percent of the owner's or operator's average annual gross income form all sources, in order to qualify as a bona-fide operation.

***Farm Operation:*** Any activity conducted solely or primarily for the production of one or more agricultural products or commodities, including timber, for sale and home use, and customarily producing such products or commodities in sufficient quantity to be capable of contributing materially to the operator's support.

***Nonprofit Organization:*** A public or private entity that has established its nonprofit status under applicable law.

# MOVING EXPENSES

If you qualify as a displaced business, farm or nonprofit organization, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. To qualify you must legally occupy the property as the owner or lessee/tenant when Caltrans initiates negotiations for the acquisition of the property **OR** at the time Caltrans acquires title or takes possession of the property. However, to assure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

## You Can Choose Either:

**Actual Reasonable Moving Costs** – You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses, with limitations, ***may*** include:

- Transportation.
- Packing and unpacking of personal property.
- Disconnecting and reconnecting personal property related to the operation.
- Temporary storage of personal property.
- Insurance while property is in storage or transit, or the loss and damage of personal property if insurance is not reasonably available.
- Expenses in finding a replacement location.
- Professional services to plan and monitor the move of the personal property to the new location.
- Licenses, permits and fees required at the replacement location.

## OR

**Self-Move Agreement** – You may be paid to move your own personal property based on the lower of two acceptable bids obtained by Caltrans.

Under this option, you will still be eligible for reimbursement of related expenses listed above that were not included in the bids.

## OR

**In-Lieu Payment** – You can accept a fixed payment between $1,000 and $20,000, based on your annual earnings IN LIEU OF the moving cost, related expenses and reestablishment cost.

## Actual Reasonable Moving Costs

You may be paid the actual reasonable and necessary costs of your move when a professional mover performs the move. All of your moving costs must be supported by paid receipts or other evidence of expenses incurred. In addition to the transportation costs of your personal property, certain other expenses may also be reimbursable, such as packing, crating, unpacking and uncrating, and the disconnecting, dismantling, removing, reassembling, and reinstalling relocated machinery, equipment, and other personal property.

Other expenses such as professional services necessary for planning and carrying out the move, temporary storage costs, and the cost of licenses, permits and certifications may also be reimbursable. This is not intended to be an all-inclusive list of moving related expenses. Your Relocation Agent can provide you with a complete explanation of reimbursable expenses.

## Self-Move Agreement

If you agree to take full responsibility for all or part of the move of your business, farm, or nonprofit organization, the Department may approve a payment not to exceed the lower of two acceptable bids obtained by the Department from qualified moving firms or a qualified Department staff employee. A low-cost or uncomplicated move may be based on a single bid or estimate at the Department's discretion. The advantage of this moving option is the fact that it relieves the displaced business, farm or nonprofit organization operator from documenting all moving expenses. The Department may make the payment without additional documentation as long as the payment is limited to the amount of the lowest acceptable bid or estimate. Other expenses, such as professional services for planning, storage costs, and the cost of licenses, permits, and certifications may also be reimbursable if determined to be necessary. These latter expenses must be pre approved by the Relocation Agent.

## Requirements:

Before you move, you must provide Caltrans with the:

- Certified inventory of all personal property to be moved.
- Date you intend to vacate the property.
- Address of the replacement property.
- Opportunity to monitor and inspect the move from the acquired property to the replacement property.

## Related Expenses

1. **Searching Expenses for Replacement Property:** Displaced businesses, farms and nonprofit organizations are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property, not to exceed $2,500. Expenses may include transportation, meals, and lodging when away from home; the reasonable value of the time spent during the search; fees paid to the real estate agents, brokers or consultants; and other expenses determined to be reasonable and necessary by the Department.

2. **Direct Loss of Tangible Personal Property:** Displaced businesses, farms, and nonprofit organizations may be eligible for a payment for the actual direct loss of tangible personal property which is incurred as a result of the move or discontinuance of the operation. This payment will be based upon the lesser of:

    a. The fair market value of the item for continued use at the displacement site minus the proceeds from its sale.

    **OR**

    b. The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expense4s, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE:
You determine that the "document shredder" cannot be moved to the new location because of its condition, and you will not replace it at the new location.

| | |
|---|---|
| Fair Market Value of the Document Shredder Based on its use at the current location | $ 1,500 |
| Proceeds: Price received from selling the Document Shredder | - $ 500 |
| Net Value | $ 1,000 |

OR

| | |
|---|---|
| Estimated cost to move | $ 1,050 |

Based on the "lesser of", the amount of the "Loss of Tangible Personal Property" = **$ 1,000**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

3. Purchase of Substitute Personal Property: If an item of personal property, which is used as part of the business, farm, or nonprofit organization, is not moved but is promptly replaced with a substitute item that performs a comparable function at the replacement site, the displacee is entitled to payment of the lesser of:

   a. The cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item;

   **OR**

   b. The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

**EXAMPLE A:**

You determine that the copying machine cannot be moved to the new location because it is now obsolete and you will replace it.

| | | |
|---|---|---|
| Cost of a substitute copy machine | | |
| Including installation costs at the replacement site | | $ 3,000 |
| Trade-in Allowance | - | $ 2,500 |
| Net Value | | $ 500 |

OR

| | |
|---|---|
| Estimated cost to move | $ 550 |

| | |
|---|---|
| Based on the "lesser of", the amount of the "Substitute Personal Property" = | **$ 500** |

**EXAMPLE B:**

You determine that the chairs will not be used at the new location because they no longer match the décor and you will replace them.

| | | |
|---|---|---|
| Cost of substitute chairs | | $ 1,000 |
| Proceeds from selling the chairs | - | $ 100 |
| Net Value | | $ 900 |

OR

| | |
|---|---|
| Estimated cost to move | $ 200 |

| | |
|---|---|
| Based on the "lesser of", the amount of the "Substitute Personal Property" = | **$ 200** |

Note: You are also entitled to all reasonable costs incurred in attempting to sell the copy machine and/or chairs.

4. **Disconnecting and Reinstallation:** You will be reimbursed for your actual and reasonable costs to disconnect, dismantle, remove, reassemble and reinstall any machinery, equipment or other personal property in relation to its move to the new location. This includes connection to utilities available nearby and any modifications to the

personalty that is necessary to adapt it to utilities at the replacement site.

5. **Physical changes at the new location:** You may be reimbursed for certain physical changes to the replacement property if the changes are necessary to permit the reinstallation of machinery or equipment necessary for the continue operation of the business. ***Note:*** *The changes cannot increase the value of the building for general purposes, nor can they increase the mechanical capability of the buildings beyond its normal requirements.*

6. The cost of installing utilities from the right of way line to the structure(s) or improvements on the replacement site.

7. Marketing studies, feasibility surveys and soil testing.

8. Professional real estate services needed for the purchase or lease of a replacement site.

9. One-time assessments or impact fees for anticipated heavy utility usage.

## Reestablishment Expenses

A small business, farm or nonprofit organization may be eligible for a payment, not to exceed $10,000, for expenses actually incurred in relocating and reestablishing the enterprise at a replacement site.

Reestablishment expenses may include, but are not limited to, the following:

1. Repairs or improvements to the replacement real property required by Federal, State or local laws, codes or ordinances.

2. Modifications to the replacement real property to make the structure(s) suitable for the business operation.

3. Construction and installation of exterior signing to advertise the business.

4. Redecoration or replacement such as painting, wallpapering, paneling or carpeting when required by the condition of the replacement site or for aesthetic purposes.

5. Advertising the new business location.

6. The estimated increased costs of operation at the replacement site during the first two years, for items such as:

    a) Lease or rental charges
    b) Personal or real property taxes
    c) Insurance premiums, and
    d) Utility charges (excluding impact fees).

7. Other items that the Department considers essential for the reestablishment of the business or farm.

***Note:*** *A nonprofit organization must substantiate that it cannot be relocated without a substantial loss of existing patronage (membership or clientele). The payment is based on the average of two years annual gross revenues less administrative expenses.*

## In-Lieu Payment (Fixed)

Displaced businesses, farms and nonprofit organizations may be eligible for a fixed payment in lieu of (in place of) actual moving expenses, personal property losses, searching expense, and reestablishment expenses. The fixed payment may not be less than $1,000 or more than $20,000.

For a business to be eligible for a fixed payment, the Department must determine the following:

1. The business owns or rents personal property that must be moved due to the displacement.

2. The business cannot be relocated without a substantial loss of existing patronage.

3. The business is not part of a commercial enterprise having more than three other businesses engaged in the same or similar activity, which are under the same ownership and are not being displaced by the department.

4. The business contributed materially to the income of the displaced business operator during the two taxable years prior to displacement.

Any business operation that is engaged solely in the rental of space to others is not eligible for a fixed payment. This includes the rental of space for residential or business purposes.

Eligibility requirements for farms and nonprofit organizations are slightly different than business requirements. If you are being displaced from a farm or your represent a nonprofit organization and are interested in a fixed payment, please consult your relocation counselor for additional information.

## The Computation of Your In-Lieu Payment:

The fixed payment for a displaced business or farm is based upon the average annual net earnings of the operation for the two taxable years immediately preceding the taxable year in which it is displaced. Caltrans can use a different two year period if it is determined that the last two taxable years do not accurately reflect the earnings of the operation.

**EXAMPLE:** Caltrans acquires your property and you move in 2005:

| | |
|---|---|
| 2003 Annual Net Earnings | $ 10,500 |
| 2004 Annual Net Earnings | $ 12,500 |
| TOTAL | $ 23,000 |
| **Average over two years** | **$ 11,500** |

This would be the amount of your in-lieu payment. Remember – this is in-lieu of all other moving benefits, including reestablishment expenses. You must provide the Department with proof of net earnings to support your claim.

Proof of net earnings can be documented by income tax returns, certified financial statements, or other reasonable evidence of net earnings acceptable to the Department.

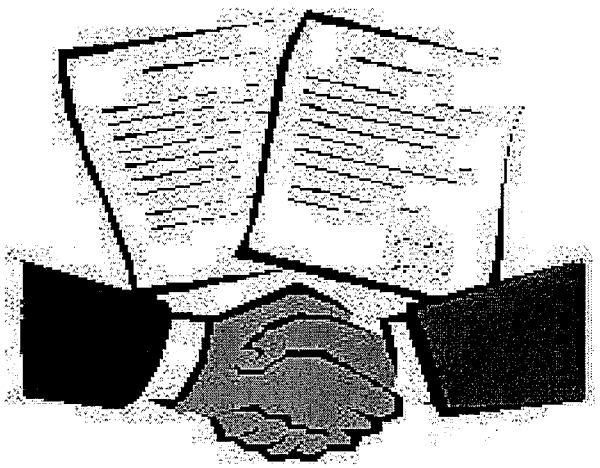
*Note: The computation for nonprofit organizations differs in that the payment is computed on the basis of average annual gross revenues less administrative expenses for the two year period specified above.*

## Before You Move:

A. Request a determination of entitlement for in-lieu payment from your Relocation Agent.
B. Include a written statement of the reasons the business cannot be relocated without a substantial loss in net earnings.

C. Provide certified copies of tax returns for the two tax years immediately preceding the tax year in which you move. (If you move anytime in the year 2005, regardless of when negotiations began or the State took title to the property, the taxable years would be 2003 and 2004).
D. You will be notified of the amount you are entitled to after the application is received and approved.
E. You cannot receive the payment until after you vacate the property, AND submit a claim for the payment within 18 months of the date of your move.

## Relocation Advisory Assistance



Any business, farm or nonprofit organization displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your needs and desires will be determined as well as your need for assistance.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Determine your needs and preferences.
- Explain the relocation benefits and eligibility requirements.
- Provide information on replacement properties for your consideration.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits
- Interest rates and terms
- Typical down payments
- Permits, fees and local planning
- SBA loan requirements
- Real property taxes.
- Consumer education literature

If you desire, your Relocation Agent will give you current listings of other available replacement property. Transportation will be provided to inspect available property, especially if you are elderly or handicapped. Though you may use the services of a real estate broker, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local programs offering assistance to displaced persons. If you have special needs, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans will establish a temporary Relocation Field Office on or near the project. Project relocation offices will be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions. And be sure you fully understand all of your rights and available benefits.

## YOUR RIGHTS AS A DISPLACEE

It is important to remember that your relocation benefits will not have an adverse affect on your:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you always have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible agency if that

person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

# APPENDIX G

## CALTRANS TITLE VI POLICY STATEMENT

**DEPARTMENT OF TRANSPORTATION**
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*Flex your power!*
*Be energy efficient!*

August 25, 2009

# TITLE VI
# POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

Randell H. Iwasaki

RANDELL H. IWASAKI
Director

# APPENDIX H

TRAFFIC DATA

# APPENDIX H

# TRAFFIC DATA

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## INTRODUCTION

The traffic data tables presented in this appendix were compiled from data in the *Tier II Traffic Technical Report* (VRPA Technologies 2009) with a *Memorandum for SR-11/Siempre Viva Road Design Variation* (VRPA Technologies 2010). These tables present the results of analysis summarized in Section 3.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities* of the EIR/EIS.

**Table H-1**
**EXISTING FREEWAY SEGMENT CAPACITY**

| Route | Limits | 2009 Two-way ADT | Peak Hour Volume (VEH/HR) | Total No. of Lanes | Total Capacity (VEH/HR) | Truck Percentage (%) | 2009 V/C | 2009 LOS |
|---|---|---|---|---|---|---|---|---|
| SR-125 | North of Otay Mesa Road | 9,800 | 485 | 4 | 4,000 | 5 | 0.13 | A |
| SR-905 | I-5 to I-805 | 55,000 | 2,723 | 4 | 4,000 | 15 | 0.78 | C |
| | I-805 to Otay Mesa Road | 63,200 | 3,128 | 4 | 4,000 | 15 | 0.90 | D |
| | Siempre Viva Road to International Border [1] | 38,800 | 1,921 | 4 | 4,000 | 15 | 0.55 | B |
| I-5 | North of SR-905 | 117,000 | 5,792 | 8 | 8,000 | 10 | 0.80 | D |
| | SR-905 to I-805 | 83,000 | 4,109 | 8 | 8,000 | 1 | 0.52 | B |
| | Via de San Ysidro to International Border [1] | 114,200 | 5,653 | 12 | 12,000 | 1 | 0.48 | B |
| I-805 | North of SR-905 | 127,000 | 6,287 | 8 | 8,000 | 10 | 0.86 | D |
| | SR-905 to I-5 | 69,400 | 3,435 | 8 | 8,000 | 1 | 0.43 | B |

Source: VRPA Technologies 2009
Notes:
[1] The capacity analysis shown in this table represents the physical capacity of the roadway, but traffic operations near the international border are controlled by capacity constraints related to border crossing operations.
VEH/HR = Vehicles per Hour
V/C = Volume to Capacity Ratio (a measure of traffic demand expressed as volume compared to traffic-carrying capacity). Volume to capacity calculation assumes each truck is equivalent to two passenger cars.
LOS = Level of Service

**Table H-2**
**EXISTING ROADWAY SEGMENT CAPACITY**

| Route | Limits | Classification/ Jurisdiction | 2009 Two-way ADT | 2009 V/C / LOS [1] |
|---|---|---|---|---|
| Otay Mesa Road | Britannia Boulevard to La Media Road | 6 Lane Prime/City | 52,900 | 0.88 / D |
| | La Media Road to Piper Ranch Road | 6 Lane Major/City | 43,600 | 0.87 / D |
| | Piper Ranch Road to SR-125 | 6 Lane Major/City | 38,200 | 0.76 / C |
| | SR-125 to Sanyo Avenue | Rural Collector/County | 11,600 | **0.72 / E** |
| | Sanyo Avenue to Enrico Fermi Drive | Rural Collector/County | 8,700 | 0.54 / D |
| | Enrico Fermi Drive to Alta Road | Rural Collector/County | 7,000 | 0.43 / C |
| Airway Road | Britannia Boulevard to La Media Road | 2 Lane Collector/City | 6,800 | 0.45 / B |
| | La Media Road to SR-905 | 2 Lane Collector/City | 7,300 | 0.49 / C |
| | SR-905 to Enrico Fermi Drive | Rural Collector/County | 1,600 | 0.10 / A |
| Siempre Viva Road | Britannia Boulevard to La Media Road | 2 Lane Collector/City | 300 | 0.02 / A |
| | La Media Road to Otay Center Drive | 6 Lane Major/City | 11,700 | 0.20 / A |
| | Otay Center Drive to SR-905 | 6 Lane Prime/City | 10,200 | 0.17 / A |
| | SR-905 to Paseo De Las Americas | 4 Lane Major/City | 21,600 | 0.54 / C |
| | Paseo De Las Americas to Enrico Fermi Drive | 4 Lane Major/City | 4,500 | 0.11 / A |
| Britannia Boulevard | Otay Mesa Road to Airway Road | Collector/City | 6,800 | 0.20 / B |
| | Airway Road to Siempre Viva Road | Collector/City | 2,900 | 0.08 / A |
| La Media Road | North of Otay Mesa Road | 2 Lane Collector/City | 5,900 | 0.39 / B |
| | Otay Mesa Road to Airway Road | 2 Lane Collector/City | 8,900 | 0.59 / C |
| | Airway Road to Siempre Viva Road | 2 Lane Collector/City | 6,900 | 0.46 / B |
| Piper Ranch Road | North of Otay Mesa Road | 2 Lane Collector/City | 5,400 | 0.36 / B |
| Sanyo Avenue | Otay Mesa Road to Airway Road | 2 Lane Collector/City | 3,200 | 0.21 / A |
| Enrico Fermi Drive | Otay Mesa Road to Airway Road | Collector/County | 1,500 | 0.04 / A |
| | Airway Road to Siempre Viva Road | Collector/County | 3,100 | 0.09 / A |
| | South of Siempre Viva Road | Collector/County | 3,000 | 0.09 / A |

Source: VRPA Technologies 2009
Notes:
[1] Results shown in **BOLD** print exhibit undesirable levels of service (LOS) E or F.
ADT = Average Daily Traffic
V/C = Volume to Capacity Ratio (a measure of traffic demand expressed as volume compared to traffic-carrying capacity). Volume to capacity calculation assumes each truck is equivalent to two passenger cars.

**Table H-3**
**EXISTING INTERSECTION CAPACITY**

| Intersection | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | LOS [1] | Average Delay (sec) | LOS [1] | Average Delay (sec)[3] |
| Otay Mesa Road and Britannia Boulevard | B | 14.6 | B | 11.5 |
| Otay Mesa Road and La Media Road | C | 26.9 | D | 44.4 |
| Otay Mesa Road and Piper Ranch Road | B | 15.1 | B | 10.4 |
| Otay Mesa Road and SR-125 SB Ramp | A | 8.4 | A | 9.2 |
| Otay Mesa Road and SR-125 NB Ramp | A | 0.6 | B | 10.3 |
| Otay Mesa Road and SR-905 | B | 11.6 | C | 32.5 |
| Otay Mesa Road and Harvest Road[2] | B | 12.0 | C | 24.3 |
| Otay Mesa Road and Sanyo Avenue[2] | C | 20.8 | **E** | 48.7 |
| Otay Mesa Road and Enrico Fermi Drive[2] | C | 15.2 | C | 15.0 |
| Otay Mesa Road and Alta Road[2] | **E** | 44.4 | B | 12.9 |
| Airway Road and Britannia Boulevard | C | 22.3 | B | 13.7 |
| Airway Road and La Media Road | C | 16.2 | **E** | 39.2 |
| Airway Road and SR-905 | B | 14.0 | C | 34.4 |
| Airway Road and Sanyo Avenue | A | 8.6 | A | 8.4 |
| Airway Road and Paseo De Las Americas[2] | A | 9.1 | A | 10.0 |
| Airway Road and Enrico Fermi Drive | A | 6.3 | A | 6.3 |
| Siempre Viva Road and Britannia Boulevard | A | 8.3 | B | 12.8 |
| Siempre Viva Road and La Media Road[2] | A | 9.4 | A | 9.4 |
| Siempre Viva Road and Otay Center Drive | C | 27.1 | C | 21.8 |
| Siempre Viva Road and SR-905 SB Ramps | A | 2.3 | A | 6.6 |
| Siempre Viva Road and SR-905 NB Ramps | B | 10.6 | B | 13.2 |
| Siempre Viva Road and Paseo De Las Americas | **E** | 72.2 | **F** | >80.0 |
| Siempre Viva Road and Enrico Fermi Drive | B | 17.3 | B | 15.6 |

Source: VRPA Technologies 2009

[1] Results shown in **BOLD** print exhibit undesirable levels of service (LOS) E or F.

[2] Unsignalized two-way stop controlled intersection. LOS and delay are shown for worst movement only.

3 Delay is defined as the additional travel time experienced by a driver at an intersection as compared to a free flowing condition, expressed in seconds and averaged for all vehicles that enter the intersection in the peak hour

**Table H-4**
**EXISTING AND FUTURE FREEWAY SEGMENT CAPACITY**

| Route | Limits / Total No. of Lanes | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| SR-125 | North of Lone Star Road / 4 | Existing | 9,800 | 0.13/A | 9,800 | 0.13/A | 9,800 | 0.13/A | 9,800 | 0.13/A |
| | | 2015 | 31,000 | 0.40/A | 32,800 | 0.43/B | 32,800 | 0.43/B | 34,000 | 0.44/B |
| | | 2035 | 70,600 | 0.92/D | 71,000 | **0.92/E** | 71,000 | **0.92/E** | 74,900 | **0.97/E** |
| | Lone Star Road to Otay Mesa Road / 4 | Existing | 9,800 | 0.13/A | 9,800 | 0.13/A | 9,800 | 0.13/A | 9,800 | 0.13/A |
| | | 2015 | 31,000 | 0.40/A | 32,800 | 0.43/B | 32,800 | 0.43/B | 34,000 | 0.44/B |
| | | 2035 | 52,600 | 0.68/C | 52,400 | 0.68/C | 52,400 | 0.68/C | 61,100 | 0.79/D |
| SR-905 | I-5 to I-805 / 6 | Existing | 55,000 | 0.78/C | 55,000 | 0.78/C | 55,000 | 0.78/C | 55,000 | 0.78/C |
| | | 2015 | 66,900 | 0.63/C | 69,500 | 0.66/C | 69,600 | 0.66/C | 70,100 | 0.67/C |
| | | 2035 | 107,600 | **1.02/F** | 110,000 | **1.04/F** | 109,100 | **1.04/F** | 109,400 | **1.04/F** |
| | I-805 to Otay Mesa Road / 6 | Existing | 63,200 | 0.90/D | 63,200 | 0.90/D | 63,200 | 0.90/D | 63,200 | 0.90/D |
| | | 2015 | 76,900 | 0.73/C | 82,200 | 0.78/C | 81,800 | 0.78/C | 83,700 | 0.79/D |
| | | 2035 | 163,400 | **1.55/F** | 164,300 | **1.56/F** | 162,300 | **1.54/F** | 163,700 | **1.55/F** |
| | Otay Mesa Road to Britannia Boulevard / 6 | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 60,800 | 0.58/B | 66,400 | 0.63/C | 66,000 | 0.63/C | 68,000 | 0.65/C |
| | | 2035 | 151,800 | **1.44/F** | 144,800 | **1.37/F** | 141,800 | **1.35/F** | 153,300 | **1.45/F** |
| | Britannia Boulevard to La Media Road/ 6 | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 86,600 | 0.82/D | 66,400 | 0.63/C | 63,000 | 0.60/B | 65,200 | 0.62/B |
| | | 2035 | 124,600 | **1.18/F** | 129,600 | **1.23/F** | 125,800 | **1.19/F** | 130,300 | **1.24/F** |
| | SR-125/SR-11 to Siempre Viva Road / 6 | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 53,400 | 0.51/B | 46,400 | 0.44/B | 47,200 | 0.45/B | 49,000 | 0.46/B |
| | | 2035 | 88,400 | 0.84/D | 74,000 | 0.70/C | 80,800 | 0.77/C | 94,000 | 0.89/D |
| | Siempre Viva Road to International Border / 6 | Existing* | 38,800 | 0.55/B | 38,800 | 0.55/B | 38,800 | 0.55/B | 38,800 | 0.55/B |
| | | 2015 | 49,400 | 0.47/B | 42,200 | 0.40/A | 42,200 | 0.40/A | 42,200 | 0.40/A |
| | | 2035 | 85,400 | 0.81/D | 74,400 | 0.71/C | 74,400 | 0.71/C | 74,400 | 0.71/C |

Source: VRPA Technologies 2009
*This segment of SR-905 is 4 lanes for the existing condition.
Notes:
[1] Results shown in **BOLD** print would exhibit undesirable levels of service (LOS) E or F.
ADT = Average Daily Traffic
V/C = Volume to Capacity Ratio (a measure of traffic demand expressed as volume compared to traffic-carrying capacity). Volume to capacity calculation assumes each truck is equivalent to two passenger cars.

**Table H-4 (cont.)**
**EXISTING AND FUTURE FREEWAY SEGMENT CAPACITY**

| Route | Limits / Total No. of Lanes | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| I-5 | North of SR-905 / 8 | Existing | 117,000 | 0.80/D | 117,000 | 0.80/D | 117,000 | 0.80/D | 117,000 | 0.80/D |
| | | 2015 | 125,300 | 0.85/D | 125,700 | 0.86/D | 125,700 | 0.86/D | 125,700 | 0.86/D |
| | | 2035 | 162,900 | **1.11/F** | 163,900 | **1.12/F** | 163,900 | **1.12/F** | 162,900 | **1.11/F** |
| | SR-905 to I-805 / 8 | Existing | 83,000 | 0.52/B | 83,000 | 0.52/B | 83,000 | 0.52/B | 83,000 | 0.52/B |
| | | 2015 | 76,000 | 0.47/B | 81,000 | 0.51/B | 70,700 | 0.44/B | 70,700 | 0.44/B |
| | | 2035 | 83,100 | 0.52/B | 83,600 | 0.52/B | 83,600 | 0.52/B | 83,600 | 0.52/B |
| | I-805 to International Border / 12 | Existing | 114,200 | 0.48/B | 114,200 | 0.48/B | 114,200 | 0.48/B | 114,200 | 0.48/B |
| | | 2015 | 130,700 | 0.54/B | 112,100 | 0.47/B | 112,100 | 0.47/B | 112,100 | 0.47/B |
| | | 2035 | 186,200 | 0.78/C | 151,600 | 0.63/C | 151,600 | 0.63/C | 151,600 | 0.63/C |
| I-805 | North of SR-905/ 8 | Existing | 127,000 | 0.86/D | 127,000 | 0.86/D | 127,000 | 0.86/D | 127,000 | 0.86/D |
| | | 2015 | 161,700 | **1.10/F** | 155,700 | **1.06/F** | 154,700 | **1.05/F** | 156,300 | **1.06/F** |
| | | 2035 | 230,200 | **1.57/F** | 217,900 | **1.48/F** | 216,900 | **1.48/F** | 216,600 | **1.47/F** |
| | SR-905 to I-5 / 8 | Existing | 69,400 | 0.43/B | 69,400 | 0.43/B | 69,400 | 0.43/B | 69,400 | 0.43/B |
| | | 2015 | 114,200 | 0.71/C | 103,700 | 0.65/C | 103,700 | 0.65/C | 103,800 | 0.65/C |
| | | 2035 | 152,000 | **0.95/E** | 132,200 | 0.83/D | 131,900 | 0.82/D | 131,400 | 0.82/D |

Source: VRPA Technologies 2009

Notes:

[1] Results shown in **BOLD** print exhibit undesirable levels of service (LOS) E or F.

ADT = Average Daily Traffic

V/C = Volume to Capacity Ratio (a measure of traffic demand expressed as volume compared to traffic-carrying capacity). Volume to capacity calculation assumes each truck is equivalent to two passenger cars.

**Table H-5**
**EXISTING AND FUTURE ROADWAY SEGMENT CAPACITY**

| Route | Limits | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| Lone Star Road | La Media to SR-125 | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2035 | N/A | N/A | 21,600 | 0.54/C | 21,900 | 0.55/C | N/A | N/A |
| | SR-125 to Sunroad Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 2,400 | 0.06/A | 2,000 | 0.05/A | 2,000 | 0.05/A | 2,000 | 0.05/A |
| | | 2035 | 40,400 | **1.01/F** | 39,000 | **0.98/E** | 39,900 | **1.00/E** | 44,800 | **1.12/F** |
| | Sunroad Boulevard to Enrico Fermi Drive | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 2,200 | 0.06/A | 3,000 | 0.08/A | 2,000 | 0.05/A | 2,000 | 0.05/A |
| | | 2035 | 30,500 | 0.82/D | 29,100 | 0.79/C | 32,700 | 0.88/D | 38,200 | **1.03/F** |
| | Enrico Fermi Drive to Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 4,500 | 0.12/A | 4,000 | 0.11/A | 2,000 | 0.05/A | 5,000 | 0.14/A |
| | | 2035 | 18,400 | 0.50/B | 17,800 | 0.48/B | 16,700 | 0.45/B | 20,000 | 0.54/B |
| | Alta Road to Otay Mesa Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,200 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 7,500 | 0.20/A | 6,700 | 0.18/A | 5,900 | 0.16/A | 6,500 | 0.18/A |
| | Otay Mesa Road to Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,100 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 3,700 | 0.10/A | 5,100 | 0.14/A | 3,800 | 0.10/A | 4,300 | 0.12/A |
| Zinser Road | Piper Ranch Road to Lone Star Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 3,000 | 0.09/A | 4,000 | 0.12/A | 3,000 | 0.09/A | 3,000 | 0.09/A |
| | | 2035 | 21,100 | 0.62/B | 19,000 | 0.56/B | 20,700 | 0.61/B | 24,800 | 0.73/C |
| Otay Mesa Road | Britannia Boulevard to La Media Road | Existing | 52,900 | 0.88/D | 52,900 | 0.88/D | 52,900 | 0.88/D | 52,900 | 0.88/D |
| | | 2015 | 12,400 | 0.21/A | 12,000 | 0.20/A | 12,000 | 0.20/A | 13,000 | 0.22/A |
| | | 2035 | 38,500 | 0.64/C | 36,900 | 0.62/C | 37,900 | 0.63/C | 39,700 | 0.66/C |
| | La Media Road to SR-125 | Existing | 43,600 | 0.87/D | 43,600 | 0.87/D | 43,600 | 0.87/D | 43,600 | 0.87/D |
| | | 2015 | 7,700 | 0.13/A | 8,000 | 0.13/A | 7,000 | 0.12/A | 8,000 | 0.13/A |
| | | 2035 | 45,300 | 0.76/C | 41,300 | 0.69/C | 35,600 | 0.59/C | 20,500 | 0.34/A |
| | SR-125 to Van Center Boulevard (Sunroad) | Existing | 11,600 | **0.72/E** | 11,600 | **0.72/E** | 11,600 | **0.72/E** | 11,600 | **0.72/E** |
| | | 2015 | 5,100 | 0.09/A | 5,700 | 0.10/A | 6,000 | 0.10/A | 7,000 | 0.12/A |
| | | 2035 | 17,600 | 0.29/A | 17,900 | 0.45/A | 20,600 | 0.52/A | 20,500 | 0.34/A |

**Table H-5 (cont.)**
**EXISTING AND FUTURE ROADWAY SEGMENT CAPACITY**

| Route | Limits | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| Otay Mesa Road (cont.) | Van Center Boulevard (Sunroad) to Enrico Fermi Drive | Existing | 8,700 | 0.54/D | 8,700 | 0.54/D | 8,700 | 0.54/D | 8,700 | 0.54/D |
| | | 2015 | 3,000 | 0.05/A | 3,800 | 0.07/A | 4,000 | 0.07/A | 3,000 | 0.05/A |
| | | 2035 | 12,600 | 0.22/A | 12,100 | 0.21/A | 12,800 | 0.22/A | 17,200 | 0.30/B |
| | Enrico Fermi Drive to Alta Road | Existing | 7,000 | 0.43/C | 7,000 | 0.43/C | 7,000 | 0.43/C | 7,000 | 0.43/C |
| | | 2015 | 1,800 | 0.05/A | 2,000 | 0.05/A | 4,000 | 0.11/A | 1,000 | 0.03/A |
| | | 2035 | 12,200 | 0.33/A | 9,900 | 0.27/A | 10,200 | 0.28/A | 7,800 | 0.21/A |
| | Alta Road to Lone Star Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 400 | 0.01/A | 100 | 0.00/A | 0 | 0.00/A | 0 | 0.00/A |
| | | 2035 | 1,500 | 0.04/A | 1,000 | 0.03/A | 4,000 | 0.11/A | 2,400 | 0.06/A |
| Airway Road | Britannia Boulevard to La Media Road | Existing | 6,800 | 0.45/B | 6,800 | 0.45/B | 6,800 | 0.45/B | 6,800 | 0.45/B |
| | | 2015 | 9,300 | 0.23/A | 9,000 | 0.23/A | 9,000 | 0.23/A | 9,000 | 0.23/A |
| | | 2035 | 20,700 | 0.52/B | 18,600 | 0.47/B | 20,400 | 0.51/B | 22,300 | 0.56/C |
| | La Media Road to Sanyo Road (Harvest) | Existing | 7,300 | 0.49/C | 7,300 | 0.49/C | 7,300 | 0.49/C | 7,300 | 0.49/C |
| | | 2015 | 6,400 | 0.16/A | 7,000 | 0.18/A | 7,000 | 0.18/A | 8,000 | 0.20/A |
| | | 2035 | 19,400 | 0.49/B | 17,000 | 0.43/B | 18,100 | 0.45/B | 25,400 | 0.64/C |
| | Sanyo Road (Harvest) to Paseo De Las Americas | Existing | 1,600 | 0.10/A | 1,600 | 0.10/A | 1,600 | 0.10/A | 1,600 | 0.10/A |
| | | 2015 | 900 | 0.02/A | 1,000 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 4,900 | 0.12/A | 9,900 | 0.25/A | 11,200 | 0.28/A | 8,600 | 0.22/A |
| | Paseo De Las Americas to Enrico Fermi Drive | Existing | 1,600 | 0.10/A | 1,600 | 0.10/A | 1,600 | 0.10/A | 1,600 | 0.10/A |
| | | 2015 | 700 | 0.02/A | 1,000 | 0.03/A | 2,000 | 0.05/A | 2,000 | 0.05/A |
| | | 2035 | 9,200 | 0.25/A | 8,600 | 0.23/A | 9,700 | 0.26/A | 18,800 | 0.51/B |
| | Enrico Fermi Drive to Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 500 | 0.01/A | 1,000 | 0.03/A | 3,000 | 0.08/A | 2,000 | 0.05/A |
| | | 2035 | 10,700 | 0.29/A | 9,300 | 0.25/A | 7,600 | 0.21/A | 10,800 | 0.29/A |
| | Alta Road to Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,200 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 8,200 | 0.22/A | 5,700 | 0.15/A | 16,600 | 0.45/B | 5,400 | 0.15/A |

**Table H-5 (cont.)**
**EXISTING AND FUTURE ROADWAY SEGMENT CAPACITY**

| Route | Limits | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| Siempre Viva Road | Britannia Boulevard to La Media Road | Existing | 300 | 0.02/A | 300 | 0.02/A | 300 | 0.02/A | 300 | 0.02/A |
| | | 2015 | 2,300 | 0.04/A | 2,000 | 0.03/A | 2,000 | 0.03/A | 2,000 | 0.03/A |
| | | 2035 | 16,800 | 0.28/A | 16,100 | 0.27/A | 16,200 | 0.27/A | 18,600 | 0.31/A |
| | La Media Road to Otay Center Drive (Harvest) | Existing | 11,700 | 0.20/A | 11,700 | 0.20/A | 11,700 | 0.20/A | 11,700 | 0.20/A |
| | | 2015 | 8,400 | 0.14/A | 9,000 | 0.15/A | 8,000 | 0.13/A | 9,000 | 0.15/A |
| | | 2035 | 18,900 | 0.32/A | 18,200 | 0.30/A | 18,500 | 0.31/A | 21,500 | 0.36/A |
| | Otay Center Drive (Harvest) to SR-905 | Existing | 10,200 | 0.17/A | 10,200 | 0.17/A | 10,200 | 0.17/A | 10,200 | 0.17/A |
| | | 2015 | 12,100 | 0.20/A | 11,000 | 0.18/A | 10,000 | 0.17/A | 20,000 | 0.33/A |
| | | 2035 | 18,100 | 0.30/A | 17,800 | 0.30/A | 17,800 | 0.30/A | 18,800 | 0.31/A |
| | SR-905 to Paseo De Las Americas | Existing | 21,600 | 0.54/C | 21,600 | 0.54/C | 21,600 | 0.54/C | 21,600 | 0.54/C |
| | | 2015 | 27,000 | 0.45/A | 27,200 | 0.45/B | 29,000 | 0.48/B | 30,000 | 0.50/B |
| | | 2035 | 62,900 | **1.05/F** | 54,400 | 0.91/D | 60,500 | **1.01/F** | 78,500 | **1.31/F** |
| | Paseo De Las Americas to Enrico Fermi Drive | Existing | 4,500 | 0.11/A | 4,500 | 0.11/A | 4,500 | 0.11/A | 4,500 | 0.11/A |
| | | 2015 | 5,300 | 0.09/A | 7,000 | 0.12/A | 9,000 | 0.15/A | 8,000 | 0.13/A |
| | | 2035 | 25,800 | 0.43/B | 21,300 | 0.36/A | 23,600 | 0.39/A | 38,000 | 0.63/C |
| | Enrico Fermi Drive to Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,700 | 0.05/A | 2,200 | 0.06/A | 5,000 | 0.14/A | 2,000 | 0.05/A |
| | | 2035 | 16,500 | 0.45/B | 12,500 | 0.34/A | 13,500 | 0.36/A | 18,000 | 0.49/B |
| | Alta Road to Airway Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,200 | 0.03/A | 1,500 | 0.04/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 400 | 0.01/A | 11,700 | 0.32/A | 13,500 | 0.36/A | 9,000 | 0.24/A |
| | Airway Road to SR-11[2] | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,100 | 0.03/A | 1,500 | 0.04/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 3,600 | 0.10/A | 11,400 | 0.31/A | 3,600 | 0.10/A | 4,300 | 0.12/A |
| | SR-11[2] to Lone Star Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 1,000 | 0.03/A | 500 | 0.01/A | 1,000 | 0.03/A | 1,000 | 0.03/A |
| | | 2035 | 3,600 | 0.10/A | 4,800 | 0.13/A | 3,600 | 0.10/A | 4,300 | 0.12/A |

**Table H-5 (cont.)**
**EXISTING AND FUTURE ROADWAY SEGMENT CAPACITY**

| Route | Limits | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| Britannia Boulevard | Otay Mesa Road to SR-905 | Existing | 6,800 | 0.20/B | 6,800 | 0.20/B | 6,800 | 0.20/B | 6,800 | 0.20/B |
| | | 2015 | 11,600 | 0.29/A | 12,000 | 0.30/A | 12,000 | 0.30/A | 12,000 | 0.30/A |
| | | 2035 | 17,900 | 0.45/B | 18,200 | 0.46/B | 18,600 | 0.47/B | 19,400 | 0.49/B |
| | SR-905 to Airway Road | Existing | 6,800 | 0.20/B | 6,800 | 0.20/B | 6,800 | 0.20/B | 6,800 | 0.20/B |
| | | 2015 | 10,500 | 0.26/A | 11,000 | 0.28/A | 11,000 | 0.28/A | 11,000 | 0.28/A |
| | | 2035 | 22,600 | 0.57/C | 22,500 | 0.56/C | 22,700 | 0.57/C | 25,000 | 0.63/C |
| | Airway Road to Siempre Viva Road | Existing | 2,900 | 0.08/A | 2,900 | 0.08/A | 2,900 | 0.08/A | 2,900 | 0.08/A |
| | | 2015 | 7,300 | 0.18/A | 7,000 | 0.18/A | 7,000 | 0.18/A | 7,000 | 0.18/A |
| | | 2035 | 16,000 | 0.40/B | 15,900 | 0.40/B | 16,000 | 0.40/B | 17,700 | 0.44/B |
| La Media Road | Lone Star Road to Otay Mesa Road | Existing | 5,900 | 0.39/B | 5,900 | 0.39/B | 5,900 | 0.39/B | 5,900 | 0.39/B |
| | | 2015 | 13,600 | 0.23/A | 13,000 | 0.22/A | 14,000 | 0.23/A | 14,000 | 0.23/A |
| | | 2035 | 41,100 | 0.69/C | 41,000 | 0.68/C | 40,700 | 0.68/C | 42,600 | 0.71/C |
| | Otay Mesa Road to SR-905 | Existing | 8,900 | 0.59/C | 8,900 | 0.59/C | 8,900 | 0.59/C | 8,900 | 0.59/C |
| | | 2015 | 12,900 | 0.22/A | 12,000 | 0.20/A | 13,000 | 0.22/A | 15,000 | 0.25/A |
| | | 2035 | 37,200 | 0.62/C | 35,900 | 0.60/C | 38,300 | 0.64/C | 45,000 | 0.75/C |
| | SR-905 to Airway Road | Existing | 8,900 | 0.59/C | 8,900 | 0.59/C | 8,900 | 0.59/C | 8,900 | 0.59/C |
| | | 2015 | 6,300 | 0.16/A | 6,000 | 0.15/A | 7,000 | 0.18/A | 7,000 | 0.18/A |
| | | 2035 | 20,100 | 0.50/B | 19,300 | 0.32/B | 19,600 | 0.33/B | 22,600 | 0.57/C |
| | Airway Road to Siempre Viva Road | Existing | 6,900 | 0.46/B | 6,900 | 0.46/B | 6,900 | 0.46/B | 6,900 | 0.46/B |
| | | 2015 | 13,600 | 0.34/A | 13,000 | 0.33/A | 14,000 | 0.35/A | 14,000 | 0.35/A |
| | | 2035 | 21,000 | 0.53/C | 20,600 | 0.52/B | 20,700 | 0.52/B | 21,400 | 0.54/C |
| Piper Ranch Road | Lone Star Road to Zinser Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 2,300 | 0.07/A | 2,000 | 0.06/A | 3,000 | 0.09/A | 3,000 | 0.09/A |
| | | 2035 | 8,500 | 0.25/A | 7,200 | 0.21/A | 7,300 | 0.21/A | 9,800 | 0.29/A |
| | Zinser Road to Otay Mesa Road | Existing | 5,400 | 0.36/B | 5,400 | 0.36/B | 5,400 | 0.36/B | 5,400 | 0.36/B |
| | | 2015 | 8,400 | 0.28/A | 8,000 | 0.27/A | 8,000 | 0.27/A | 9,000 | 0.30/A |
| | | 2035 | 17,400 | 0.58/C | 16,500 | 0.55/C | 18,200 | 0.61/C | 19,700 | 0.66/C |
| | Otay Mesa Road to Airway Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2035 | N/A | N/A | N/A | N/A | N/A | N/A | 14,000 | 0.47/C |

**Table H-5 (cont.)**
**EXISTING AND FUTURE ROADWAY SEGMENT CAPACITY**

| Route | Limits | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| Sunroad Boulevard | Lone Star Road to Zinser Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 300 | 0.01/A | 100 | 0.00/A | 0 | 0.00/A | 0 | 0.00/A |
| | | 2035 | 7,000 | 0.20/A | 7,000 | 0.20/A | 7,400 | 0.22/A | 6,300 | 0.18/A |
| | Zinser Road to Otay Mesa Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 3,300 | 0.11/A | 4,000 | 0.13/A | 3,000 | 0.10/A | 5,000 | 0.17/A |
| | | 2035 | 25,700 | **0.86/E** | 25,400 | **0.85/E** | 23,600 | 0.79/D | 24,600 | 0.82/D |
| Otay Center Drive (Harvest) | Airway Road to Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2035 | 1,700 | 0.06/A | 6,000 | 0.20/A | 6,000 | 0.20/A | 1,700 | 0.06/A |
| Sanyo Avenue | Otay Mesa Road to Airway Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 3,500 | 0.10/A | 6,000 | 0.18/A | 4,000 | 0.13/A | 4,000 | 0.12/A |
| | | 2035 | 16,200 | 0.54/C | 17,900 | 0.45/B | 22,400 | 0.56/B | 24,600 | 0.82/D |
| | Airway Road to Paseo De Las Americas | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 9,900 | 0.33/A | 6,000 | 0.20/A | 6,000 | 0.20/A | 6,000 | 0.20/A |
| | | 2035 | 11,700 | 0.39/B | 12,300 | 0.31/B | 12,500 | 0.31/B | 10,500 | 0.35/B |
| Enrico Fermi Drive | Lone Star Road to Otay Mesa Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 5,000 | 0.09/A | 5,000 | 0.09/A | 2,000 | 0.04/A | 5,000 | 0.09/A |
| | | 2035 | 20,400 | 0.36/A | 24,400 | 0.66/B | 19,000 | 0.51/B | 9,000 | 0.16/A |
| | Otay Mesa Road to SR-11[2] | Existing | 1,500 | 0.04/A | 1,500 | 0.04/A | 1,500 | 0.04/A | 1,500 | 0.04/A |
| | | 2015 | 5,600 | 0.15/A | 8,700 | 0.24/A | 1,000 | 0.03/A | 5,000 | 0.14/A |
| | | 2035 | 33,600 | **0.91/E** | 44,300 | **1.20/F** | 12,700 | 0.34/A | 14,100 | 0.38/A |
| | SR-11[2] to Siempre Viva Road | Existing | 3,100 | 0.09/A | 3,100 | 0.09/A | 3,100 | 0.09/A | 3,100 | 0.09/A |
| | | 2015 | 3,600 | 0.10/A | 6,000 | 0.16/A | 4,000 | 0.11/A | 5,000 | 0.14/A |
| | | 2035 | 14,200 | 0.38/A | 17,800 | 0.48/B | 5,300 | 0.14/A | 7,300 | 0.20/A |
| | South of Siempre Viva Road | Existing | 3,000 | 0.09/A | 3,000 | 0.09/A | 3,000 | 0.09/A | 3,000 | 0.09/A |
| | | 2015 | 500 | 0.01/A | 1,000 | 0.03/A | 1,000 | 0.03/A | 0 | 0.00/A |
| | | 2035 | 1,400 | 0.04/A | 1,900 | 0.05/A | 2,100 | 0.06/A | 2,300 | 0.06/A |

**Table H-5 (cont.)**
**EXISTING AND FUTURE ROADWAY SEGMENT CAPACITY**

| Route | Limits | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] | ADT | V/C / LOS[1] |
| Alta Road | North of Lone Star Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 4,100 | 0.25/A | 4,000 | 0.25/B | 4,000 | 0.25/B | 4,000 | 0.25/B |
| | | 2035 | 11,800 | **0.73/E** | 11,800 | **0.73/E** | 11,900 | **0.73/E** | 11,800 | **0.73/E** |
| | Lone Star Road to Otay Mesa Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 300 | 0.01/A | 100 | 0.00/A | 3,000 | 0.08/A | 0 | 0.00/A |
| | | 2035 | 8,700 | 0.24/A | 8,900 | 0.24/A | 14,700 | 0.40/A | 7,800 | 0.21/A |
| | Otay Mesa Road to Airway Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 600 | 0.02/A | 1,000 | 0.03/A | 6,000 | 0.16/A | 0 | 0.00/A |
| | | 2035 | 8,600 | 0.23/A | 7,000 | 0.19/A | 35,600 | **0.96/E** | 8,300 | 0.22/A |
| | Airway Road to Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 2015 | 400 | 0.01/A | 100 | 0.00/A | 3,000 | 0.08/A | 0 | 0.00/A |
| | | 2035 | 500 | 0.01/A | 1,300 | 0.04/A | 12,300 | 0.33/A | 1,900 | 0.05/A |

Source: VRPA Technologies 2009
Note: [1] Results shown in **BOLD** print exhibit undesirable levels of service (LOS) E or F.
ADT = Average Daily Traffic
V/C = Volume to Capacity Ratio (a measure of traffic demand expressed as volume compared to traffic-carrying capacity). Volume to capacity calculation assumes each truck is equivalent to two passenger cars.

**Table H-6**
**EXISTING AND FUTURE INTERSECTION CAPACITY**

| Intersection | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] |
| Lone Star Road and La Media Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2035 | 24.7/C | 16.9/B | 23.4/C | 21.0/C | 25.3/C | 15.4/B | 25.8/C | 21.5/C |
| Lone Star Road and SR-125 SB Ramps | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2035 | 13.7/B | 9.2/A | 21.2/C | 23.9/C | 15.2/B | 23.2/C | 12.9/B | 23.8/C |
| Lone Star Road and SR-125 NB Ramps | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2035 | 13.0/B | 9.0/A | 11.8/B | 10.5/B | 15.7/B | 13.0/B | 12.4/B | 13.2/B |
| Lone Star Road and Piper Ranch Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 10.8/B | 6.7/A | 13.5/B | 8.4/A | 11.8/B | 8.8/A | 11.2/B | 8.8/A |
| | 2035 | 20.8/C | 10.2/B | 16.9/B | 10.9/B | 19.7/B | 23.6/C | 29.4/C | 11.6/B |
| Lone Star Road and Sunroad Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 7.7/A | 6.1/A | 6.4/A | 4.9/A | 4.3/A | 5.5/A | 3.7/A | 5.2/A |
| | 2035 | 7.1/A | 16.6/B | 9.1/A | 19.0/B | 8.7/A | 15.5/B | 22.2/C | 26.2/C |
| Lone Star Road and Zinser Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 8.7/A | 10.2/B | 15.8/B | 12.5/B | 14.6/B | 13.5/B | 15.6/B | 14.0/B |
| | 2035 | 10.6/B | 13.9/B | 13.8/B | 15.4/B | 13.4/B | 41.7/D | 19.7/B | 15.3/B |
| Lone Star Road and Van Center Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 6.9/A | 7.7/A | 6.5/A | 6.7/A | 5.5/A | 6.8/A | 6.6/A | 7.0/A |
| | 2035 | 7.6/A | 9.7/A | 9.7/A | 12.3/B | 10.1/B | 10.7/B | 19.9/B | 17.2/B |
| Lone Star Road and Enrico Fermi Drive | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 11.6/B | 8.8/A | 9.8/A | 9.7/A | 10.1/B | 8.1/A | 10.4/B | 9.2/A |
| | 2035 | 13.3/B | 9.1/A | 15.0/B | 10.5/B | 13.7/B | 13.0/B | 16.7/B | 16.8/B |
| Lone Star Road and Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 15.7/B | 16.3/B | 25.1/C | 23.5/C | 23.1/C | 23.3/C | 24.9/C | 23.6/C |
| | 2035 | 21.8/C | 29.7/C | 21.8/C | 28.1/C | 23.4/C | 28.4/C | 21.9/C | 26.7/C |

**Table H-6 (cont.)**
**EXISTING AND FUTURE INTERSECTION CAPACITY**

| Intersection | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] |
| Lone Star Road and Otay Mesa Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 8.0/A | 8.5/A | 12.9/B | 13.1/B | 8.0/A | 8.2/A | 10.8/B | 11.5/B |
| | 2035 | 10.5/B | 13.3/B | 8.7/A | 9.2/A | 12.7/B | 21.6/C | 10.8/B | 11.0/B |
| Lone Star Road and Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 11.3/B | 13.8/B | 14.5/B | 21.2/C | 15.1/B | 16.7/B | 15.4/B | 17.1/B |
| | 2035 | 10.5/B | 17.2/B | 9.9/A | 15.4/B | 11.7/B | 13.6/B | 11.8/B | 13.7/B |
| Zinser Road and Piper Ranch Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 10.5/B | 10.4/B | 14.1/B | 12.8/B | 12.0/B | 12.4/B | 12.1/B | 12.6/B |
| | 2035 | 14.1/B | 15.4/B | 12.8/B | 13.6/B | 14.9/B | 13.5/B | 14.4/B | 12.6/B |
| Zinser Road and Sunroad Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 16.3/B | 19.0/B | 22.5/C | 24.7/C | 23.4/C | 25.3/C | 21.1/C | 25.1/C |
| | 2035 | 26.5/C | 32.7/C | 23.5/C | 28.1/C | 25.0/C | 33.4/C | 25.7/C | 31.0/C |
| Otay Mesa Road and Britannia Boulevard | Existing | 14.6/B | 11.5/B | 14.6/B | 11.5/B | 14.6/B | 11.5/B | 14.6/B | 11.5/B |
| | 2015 | 12.1/B | 13.1/B | 15.4/B | 15.3/B | 16.5/B | 16.6/B | 17.8/B | 17.5/B |
| | 2035 | 16.6/B | 19.6/B | 17.6/B | 22.0/C | 18.1/B | 15.8/B | 19.5/B | 21.9/C |
| Otay Mesa Road and La Media Road | Existing | 26.9/C | 44.4/D | 26.9/C | 44.4/D | 26.9/C | 44.4/D | 26.9/C | 44.4/D |
| | 2015 | 21.9/C | 18.8/B | 22.7/C | 21.6/C | 24.0/C | 21.3/C | 25.0/C | 21.0/C |
| | 2035 | **>80.0/F** | **>80.0/F** | **74.1/E** | **>80.0/F** | **69.0/E** | **>80.0/F** | **>80.0/F** | **>80.0/F** |
| Otay Mesa Road and Piper Ranch Road | Existing | 15.1/B | 10.4/B | 15.1/B | 10.4/B | 15.1/B | 10.4/B | 15.1/B | 10.4/B |
| | 2015 | 23.0/C | 20.3/C | 25.9/C | 24.8/C | 24.5/C | 21.0/C | 24.2/C | 27.0/C |
| | 2035 | 32.7/C | 29.3/C | 27.3/C | 25.9/C | 31.5/C | 26.5/C | 39.3/C | 36.9/D |
| Otay Mesa Road and SR-125 SB Off-ramp | Existing | 8.4/A | 9.2/A | 8.4/A | 9.2/A | 8.4/A | 9.2/A | 8.4/A | 9.2/A |
| | 2015 | 6.0/A | 6.2/A | 6.5/A | 6.5/A | 11.0/B | 13.9/B | 10.8/B | 7.1/A |
| | 2035 | 7.5/A | 8.2/A | 9.3/A | 8.7/A | 9.2/A | 8.2/A | 11.0/B | 11.8/B |
| Otay Mesa Road and SR-125 NB On-ramp | Existing | 0.6/A | 10.3/B | 0.6/A | 10.3/B | 0.6/A | 10.3/B | 0.6/A | 10.3/B |
| | 2015 | 2.3/A | 2.8/A | 2.5/A | 3.1/A | 2.1/A | 3.0/A | 2.2/A | 2.6/A |
| | 2035 | 2.7/A | 5.0/A | 2.5/A | 3.9/A | 2.3/A | 4.9/A | 12.3/B | 2.4/A |
| Otay Mesa Road and Harvest Road | Existing | 12.0/B | 24.3/C | 12.0/B | 24.3/C | 12.0/B | 24.3/C | 12.0/B | 24.3/C |
| | 2015 | 14.0/B | 12.8/B | 14.0/B | 14.1/B | 14.3/B | 13.7/B | 13.0/B | 14.8/B |
| | 2035 | 22.6/C | 20.1/C | 19.4/B | 17.7/B | 19.9/B | 20.4/C | 21.5/C | 17.9/B |
| Otay Mesa Road and Sanyo Avenue | Existing | 20.8/C | **48.7/E** | 20.8/C | **48.7/E** | 20.8/C | **48.7/E** | 20.8/C | **48.7/E** |
| | 2015 | 12.2/B | 13.1/B | 17.4/B | 19.7/B | 16.9/B | 20.4/C | 20.9/C | 21.2/C |
| | 2035 | 18.9/B | 23.2/C | 22.9/C | 25.7/C | 23.7/C | 23.4/C | 21.4/C | 28.2/C |

**Table H-6 (cont.)**
**EXISTING AND FUTURE INTERSECTION CAPACITY**

| Intersection | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] |
| Otay Mesa Road and Van Center Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 5.6/A | 5.3/A | 5.2/A | 5.3/A | 5.3/A | 5.2/A | 5.8/A | 5.7/A |
| | 2035 | 8.5/A | 6.9/A | 7.7/A | 8.0/A | 9.7/A | 14.8/B | 8.3/A | 10.7/B |
| Otay Mesa Road and Enrico Fermi Drive | Existing | 15.2/C | 15.0/C | 15.2/C | 15.0/C | 15.2/C | 15.0/C | 15.2/C | 15.0/C |
| | 2015 | 13.6/B | 16.6/B | 16.1/B | 20.9/C | 18.6/B | 21.7/C | 17.6/B | 21.9/C |
| | 2035 | 26.5/C | 41.5/D | 25.4/C | **>80.0/F** | 23.1/C | 29.4/C | 23.2/C | 37.3/D |
| Otay Mesa Road and Alta Road | Existing | **44.4/E** | 12.9/B | **44.4/E** | 12.9/B | **44.4/E** | 12.9/B | **44.4/E** | 12.9/B |
| | 2015 | 11.8/B | 11.5/B | 22.4/C | 21.2/C | 16.3/B | 17.3/B | 25.2/C | 23.9/C |
| | 2035 | 26.5/C | 26.0/C | 21.2/C | 21.9/C | 53.1/D | 38.0/D | 21.6/C | 21.4/C |
| SR-905 WB Ramps and Britannia Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 7.2/A | 8.0/A | 8.5/A | 9.9/A | 11.8/B | 9.0/A | 10.8/B | 7.3/A |
| | 2035 | 8.2/A | 13.4/B | 8.5/A | 12.8/B | 10.4/B | 16.2/B | 12.2/B | 13.6/B |
| SR-905 EB Ramps and Britannia Boulevard | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 10.4/B | 10.4/B | 15.6/B | 14.4/B | 13.6/B | 11.6/B | 13.3/B | 11.2/B |
| | 2035 | 13.8/B | 17.4/B | 14.5/B | 15.0/B | 13.2/B | 17.7/B | 11.8/B | 15.8/B |
| SR-905 WB Off-ramp and La Media Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 7.9/A | 8.0/A | 11.4/A | 9.9/A | 7.5/A | 7.4/A | 6.5/A | 7.9/A |
| | 2035 | 15.1/B | 13.0/B | 10.2/B | 12.7/B | 10.3/B | 12.2/B | 17.9/C | **65.9/E** |
| SR-905 EB Ramps and La Media Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 11.6/B | 12.7/B | 11.2/B | 9.1/A | 12.8/B | 12.4/B | 12.1/B | 11.4/B |
| | 2035 | 15.0/B | 21.0/C | 15.1/B | 18.4/B | 13.6/B | 16.1/B | 30.3/C | 24.0/C |
| Enrico Fermi Drive and SR-11[3] | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 11.8/B | 10.6/B | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2035 | 3.2/A | 2.7/A | N/A | N/A | N/A | N/A | N/A | N/A |
| SR-11 WB Ramps and Enrico Fermi Drive | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | 15.6/B | 15.9/B | N/A | N/A | N/A | N/A |
| | 2035 | N/A | N/A | 19.8/B | 26.6/C | N/A | N/A | N/A | N/A |
| SR-11 EB Ramps and Enrico Fermi Drive | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | 11.1/B | 12.7/B | N/A | N/A | N/A | N/A |
| | 2035 | N/A | N/A | 21.8/C | 23.1/C | N/A | N/A | N/A | N/A |
| SR-11 WB On-ramp and Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | 5.1/A | 6.3/A | N/A | N/A | N/A | N/A |
| | 2035 | N/A | N/A | 5.4/A | 4.4/A | N/A | N/A | N/A | N/A |

**Table H-6 (cont.)**
**EXISTING AND FUTURE INTERSECTION CAPACITY**

| Intersection | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] |
| SR-11 EB Off-ramp and Siempre Viva Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | 12.3/B | 11.1/B | N/A | N/A | N/A | N/A |
| | 2035 | N/A | N/A | 8.0/A | 10.4/B | N/A | N/A | N/A | N/A |
| SR-11 WB Ramps and Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | N/A | N/A | 15.4/B | 14.9/B | N/A | N/A |
| | 2035 | N/A | N/A | N/A | N/A | 18.3/B | 24.7/C | N/A | N/A |
| SR-11 EB Ramps and Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | N/A | N/A | N/A | N/A | 11.3/B | 10.9/B | N/A | N/A |
| | 2035 | N/A | N/A | N/A | N/A | 15.7/B | 20.9/C | N/A | N/A |
| Airway Road and Britannia Boulevard | Existing | 22.3/C | 13.7/B | 22.3/C | 13.7/B | 22.3/C | 13.7/B | 22.3/C | 13.7/B |
| | 2015 | 24.4/C | 18.2/B | 27.7/C | 22.1/C | 27.7/C | 22.1/C | 27.7/C | 22.1/C |
| | 2035 | 26.9/C | 22.5/C | 26.5/C | 21.6/C | 32.9/C | 29.0/C | 28.2/C | 24.5/C |
| Airway Road and La Media Road | Existing | 16.2/C | **39.2/E** | 16.2/C | **39.2/E** | 16.2/C | **39.2/E** | 16.2/C | **39.2/E** |
| | 2015 | 18.8/B | 24.2/C | 21.0/C | 25.3/C | 22.1/C | 27.7/C | 22.3/C | 28.3/C |
| | 2035 | 39.7/D | 44.5/D | 40.3/D | 39.2/D | 42.4/D | 42.8/D | 43.5/D | 41.7/D |
| Airway Road and Sanyo Avenue | Existing | 8.6/A | 8.4/A | 8.6/A | 8.4/A | 8.6/A | 8.4/A | 8.6/A | 8.4/A |
| | 2015 | 15.9/B | 15.3/B | 17.5/B | 17.2/B | 17.4/B | 17.1/B | 17.7/B | 17.3/B |
| | 2035 | 26.2/C | 25.0/C | 25.4/C | 25.1/C | 27.7/C | 25.3/C | 27.0/C | 35.2/D |
| Airway Road and Paseo De Las Americas | Existing | 9.1/A | 10.0/A | 9.1/A | 10.0/A | 9.1/A | 10.0/A | 9.1/A | 10.0/A |
| | 2015 | 6.8/A | 8.0/A | 21.4/C | 21.1/C | 14.1/B | 14.8/B | 14.3/B | 14.8/B |
| | 2035 | 16.2/B | 15.9/B | 15.0/B | 14.4/B | 18.1/B | 16.7/B | 16.4/B | 19.4/B |
| Airway Road and Enrico Fermi Drive | Existing | 6.3/A | 6.3/A | 6.3/A | 6.3/A | 6.3/A | 6.3/A | 6.3/A | 6.3/A |
| | 2015 | 14.4/B | 15.1/B | 22.5/C | 21.2/C | 21.0/C | 21.7/C | 20.7/C | 21.4/C |
| | 2035 | 27.0/C | 24.9/C | 23.4/C | 34.1/C | 25.6/C | 30.8/C | 29.2/C | 35.4/D |
| Airway Road and Alta Road | Existing | NA | NA | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 13.9/B | 14.1/B | 32.9/C | 28.3/C | 22.1/C | 20.5/C | 28.1/C | 26.4/C |
| | 2035 | 21.5/C | 24.3/C | 19.8/B | 21.6/C | 29.6/C | 30.3/C | 20.8/C | 18.5/B |
| Siempre Viva Road and Britannia Boulevard | Existing | 8.3/A | 12.8/B | 8.3/A | 12.8/B | 8.3/A | 12.8/B | 8.3/A | 12.8/B |
| | 2015 | 16.0/B | 15.0/B | 19.9/B | 18.3/B | 19.9/B | 18.3/B | 19.9/B | 18.3/B |
| | 2035 | 28.0/C | 25.5/C | 22.8/C | 24.5/C | 22.8/C | 23.5/C | 26.5/C | 31.9/C |
| Siempre Viva Road and La Media Road | Existing | 9.4/A | 9.4/A | 9.4/A | 9.4/A | 9.4/A | 9.4/A | 9.4/A | 9.4/A |
| | 2015 | 14.9/B | 15.3/B | 22.2/C | 21.3/C | 21.9/C | 21.4/C | 21.9/C | 21.6/C |
| | 2035 | 24.2/C | 29.4/C | 21.1/C | 24.1/C | 21.5/C | 23.1/C | 23.3/C | 24.6/C |

**Table H-6 (cont.)**
**EXISTING AND FUTURE INTERSECTION CAPACITY**

| Intersection | Year | No Build Alternative | | Two Interchange Alternative | | One Interchange Alternative | | No Interchange Alternative | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] | AM Peak Hour Delay[1]/LOS[2] | PM Peak Hour Delay[1]/LOS[2] |
| Siempre Viva Road and Otay Center Drive | Existing | 27.1/C | 21.8/C | 27.1/C | 21.8/C | 27.1/C | 21.8/C | 27.1/C | 21.8/C |
| | 2015 | 25.7/C | 24.4/C | 26.4/C | 28.5/C | 26.1/C | 26.3/C | 29.3/C | 29.1/C |
| | 2035 | 26.9/C | 26.6/C | 26.5/C | 31.6/C | 28.9/C | 29.9/C | 36.3/D | 40.8/D |
| Siempre Viva Road and SR-905 SB Ramps | Existing | 2.3/A | 6.6/A | 2.3/A | 6.6/A | 2.3/A | 6.6/A | 2.3/A | 6.6/A |
| | 2015 | 7.5/A | 7.5/A | 13.4/B | 12.8/B | 12.2/B | 12.4/B | 13.4/B | 12.9/B |
| | 2035 | 8.9/A | 11.3/B | 8.2/A | 9.5/A | 13.5/B | 14.1/B | 12.0/B | 42.3/D |
| Siempre Viva Road and SR-905 NB Ramps | Existing | 10.6/B | 13.2/B | 10.6/B | 13.2/B | 10.6/B | 13.2/B | 10.6/B | 13.2/B |
| | 2015 | 11.9/B | 13.0/B | 13.3/B | 15.0/B | 14.7/B | 15.9/B | 14.6/B | 15.1/B |
| | 2035 | 44.6/D | 50.1/D | 27.4/C | 29.6/C | 31.1/C | 37.3/D | **62.1/E** | **72.3/E** |
| Siempre Viva Road and Paseo De Las Americas | Existing | **72.2/E** | **>80.0/F** | **72.2/E** | **>80.0/F** | **72.2/E** | **>80.0/F** | **72.2/E** | **>80.0/F** |
| | 2015 | 21.3/C | 24.1/C | 25.9/C | 25.9/C | 22.2/C | 27.4/C | 28.1/C | 28.4/C |
| | 2035 | 38.6/D | 53.4/D | 38.9/D | 50.8/D | 36.0/D | 38.2/D | **68.1/E** | **>80.0/F** |
| Siempre Viva Road and Enrico Fermi Drive | Existing | 17.3/B | 15.6/B | 17.3/B | 15.6/B | 17.3/B | 15.6/B | 17.3/B | 15.6/B |
| | 2015 | 17.8/B | 16.7/B | 31.4/C | 24.2/C | 29.9/C | 28.4/C | 24.9/C | 22.9/C |
| | 2035 | 34.8/C | 34.5/C | 29.3/C | 28.3/C | 29.4/C | 23.3/C | 43.3/D | **62.0/E** |
| Siempre Viva Road and Alta Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 14.6/B | 14.1/B | 22.3/C | 20.9/C | 25.7/C | 23.3/C | 24.8/C | 24.0/C |
| | 2035 | 27.4/C | 18.1/B | 30.2/C | 19.3/B | 31.6/C | 36.9/D | 16.2/B | 23.9/C |
| Siempre Viva Road and Airway Road | Existing | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2015 | 15.9/B | 15.6/B | 25.0/C | 24.9/C | 27.9/C | 25.6/C | 27.9/C | 25.6/C |
| | 2035 | 14.6/B | 16.8/B | 21.4/C | 21.9/C | 17.3/B | 21.0/C | 26.4/C | 26.1/C |

Notes:
[1] Delay is defined as the additional travel time experienced by a driver at an intersection as compared to a free flowing condition, expressed in seconds and averaged for all vehicles that enter the intersection in the peak hour
[2] Results shown in **BOLD** print exhibit undesirable levels of service (LOS) E or F.
[3] In the case of the No Build Alternative, this refers to the planned SR-905 off-ramp at Enrico Fermi Drive.

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# APPENDIX I

## STATE HISTORIC PRESERVATION OFFICER (SHPO) LETTERS

**OFFICE OF HISTORIC PRESERVATION**
**DEPARTMENT OF PARKS AND RECREATION**
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

April 24, 2008

Mr. Martin D. Rosen
Department of Transportation
4050 Taylor Street
San Diego, CA 92110

RE: 11-SD-11 PM 0.0/2.7 EA 056300 Determination of Eligibility and Affect for the State Route 11 Project, San Diego County, California

Dear Mr. Rosen:

Thank you for requesting my comments on the above cited finding. You are initiating this consultation following provisions of the January 2004 *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer*. My staff has reviewed the documentation you provided and I would like to offer the following comments.

You have requested my concurrence regarding the National Register of Historic Places eligibility evaluation made pursuant to Stipulation VIII.C.5 of the Programmatic Agreement. No architectural properties are located within the undertakings area of potential affect. You have evaluated the following sites pursuant to guidelines and context statement for the Otay Mesa which my Office had previously concurred in their application. The following sites were so evaluated: CA-SDI-8080, -11794, -12701/H, -13225, -15041, -15871, -8076/8079, -8082, -8652, -8653, -10081, -11793, -11795, -11800, -12256, -12702, -12703, -12877, -12878, -12881, -14726, -14727, -15872, -15873, -15874, -15875, -1794, -8014, and -18400. All of these properties are lithic scatters (Otay Mesa Smears) which would not or have not yielded important information about our prehistory. I concur with your determinations that the above referenced archaeological sites are not eligible for the National Register of Historic Places. Since no other properties are within the undertakings area of potential effect, I also concur with your determination of no historic properties affected by implementation of the above cited undertaking.

If my staff can be of any further assistance, please contact Dwight Dutschke or Susan Stratton at 916-653-6624.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

STATE OF CALIFORNIA – THE RESOURCES AGENCY
GRAY DAVIS, *Governor*

**OFFICE OF HISTORIC PRESERVATION**
**DEPARTMENT OF PARKS AND RECREATION**
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

November 22, 1999

Reply To: FHWA990930B

Mr. Jeffrey Lindley, Division Administrator
Federal Highway Administration
Region Nine, California Division
980 Ninth Street, Suite 400
Sacramento, CA 95814-2724

Subject: **Proposed State Route 905 (File #11-SD-905, PM 5.2/12.0), San Diego County. CA**

Dear Mr. Lindley:

Thank you for consulting me pursuant to 36 CFR 800, implementing regulations for Section 106 of the National Historic Preservation Act (NHPA). The Federal Highway Administration (FHWA) has requested my review of the Historic Property Survey Report (HPSR) for the proposed State Route 905. Route 905 will generally run east/west, parallel to the International Border, from Interstate 805 on the west to the Otay Mesa Port of Entry on the east where it will connect to proposed State Route 125 – South at a juncture several miles north of the International Border Crossing.

Your letter requested my comments on your determination of the eligibility of 21 architectural properties, 16 archaeological sites, and 2 mapped historic locations situated within the proposed project Area of Potential Effects (APE).

## ARCHITECTURAL PROPERTIES

- Otay International Center/Otay Commercial Center
  - 2455 Otay Center Drive
  - 9475 Nicola Tesla
  - 2510 Otay Center Drive
  - 1520 Roll Drive
  - 2390 Roll Drive
  - 2490-2498 Roll Drive
  - 9850 Airway Road
  - 2155 Paseo de Las Americans
  - 9651 Airway Drive
  - 2001 Sanyo Drive
  - 1725 Dornach Drive

1840 Dornach Drive
1710 Dornach Drive
1855 Dornach Drive

- San Diego Gas and Electric Substation (no street address)
- Partially demolished concrete block buildings (no street address)
- Concrete Block Buildings (no street address)
- Brown Field Business Park
  - 2055 Dublin Road
  - 7625 Panasonic Way
  - 7825 Waterville Way
  - 7664 Panasonic Way
  - 7510 Airway Road
  - 7520 Airway Road
- 1950 Cactus Road
- 1940 Cactus Road
- 1916 Cactus Road
- 1812 Cactus Road
- 1724 Cactus Road
- 1708 Cactus Road
- 1704 Cactus Road
- 1690 Cactus Road
- 1670 Cactus Road
- 1703 Cactus Road
- Mesa Business Park
  - 6960 Camino Maquiladora
  - 6950 Camino Maquiladora
  - 6940 Camino Maquiladora
  - 6930 Camino Maquiladora
  - 6965 Camino Maquiladora
  - 6975 Camino Maquiladora
  - 6955 Camino Maquiladora
  - 6935 Camino Maquiladora
  - 2675 Pacific Rim
  - 1663 Pacific Rim
- 6450 Heritage Circle
- 1625 Heritage Road
- 6275 Otay Mesa Road
- Small series of sheds (no street address)

Staff review of the HPSR and its evaluation of these properties leads me to concur with your determination that the following properties are more than 50

years old and are not eligible for inclusion in the National Register of Historic Places (NRHP): 1940 Cactus Road, 1724 Cactus Road, 1704 Cactus Road, and a series of agricultural sheds/outbuildings (APN 645-090-05). The rest of the properties are less than 50 years old and are not exceptionally significant. I agree that none of these are eligible for the NRHP.

## MAPPED HISTORICAL RESOURCES

The locations of two historical resources were identified during map research within the APE: P-37-015987 and P-37-015988. A building is shown at the location now designated P-37-015987 on the 1903 30' Cuyamaca USGS quadrangle map. Field reconnaissance of this mapped location revealed that the site has been physically altered by placement of fill soil and/or grading to the extent that little or no research potential is indicated. P-37-015988 is the location of what was once the site of St. John's Lutheran Church and an associated cemetery. The church was torn down in approximately 1940 and in 1970 the human remains were relocated from the abandoned cemetery to the Glen Abbey Memorial Park in Bonita, California.

Based on the information provided, I agree that neither location is eligible for inclusion in the NRHP. With regard to P-37-015988, although it is believed that all of the burials have been removed and reburied, I agree with the recommendation in the HPSR that monitoring be conducted during construction within the portion of the cemetery located within the APE in the event that burials present in unmarked graves are encountered.

## ARCHAEOLOGICAL SITES

The HPSR indicates that the generalized sparse lithic scatter that covers Otay Mesa was identified as not eligible for inclusion in the NRHP and was not tested for this project, in accordance with guidance provided in 1996 by the State Historic Preservation Officer (SHPO). The rationale for this is discussed in the Otay Mesa Management Plan prepared for the Route 905 project, a document reviewed by the SHP0 in 1996. The HPSR also indicates that CA-SDI-12337 was previously determined ineligible for the NRHP given the agricultural disturbance it has experienced and its lack of an intact subsurface deposit.

You are seeking my comments on your determination of the eligibility for the additional 15 archaeological sites within the APE of the undertaking. The archaeological properties include the following:

- Eligible
  CA-SDI-11424

- Ineligible

| | | |
|---|---|---|
| CA-SDI-6941, Locus G | CA-SDI-10187 | CA-SDI-14087 |
| CA-SDI-6941, Locus Y | CA-SDI-10245/10734 | |
| CA-SDI-7208 | CA-SDI-11423 | |
| CA-SDI-7604 | CA-SDI-12881 | |
| CA-SDI-10185, Locus C | CA-SDI-12882 | |
| CA-SDI-10186, Locus B | CA-SDI-14086/H | |

I concur with your determination that CA-SDI-11424 is eligible for the NRHP under criterion D based on the presence of 1) an intact subsurface deposit with a large quantity and wide range of cultural material; 2) material for radiocarbon analysis; 3) intact prehistoric features; and 4) the potential for this site to answer significant research questions contained in the HPSR.

You have indicated that CA-SDI-7604 underwent testing and data recovery in conjunction with a prior project. Given the previous work, I agree that CA-SDI-7604 is not eligible for the NRHP.

I concur that the following sites and the prehistoric component of CA-SDI-14086/H are ineligible for inclusion in the NRHP because they were found not to contain subsurface deposits, diagnostic artifacts, intact features, Native American heritage concerns, or further research potential:

| | | |
|---|---|---|
| CA-SDI-6941, Locus G | CA-SDI-10187 | CA-SDI-14087 |
| CA-SDI-6941, Locus Y | CA-SDI-10245/10734 | |
| CA-SDI-7208 | CA-SDI-11423 | |
| CA-SDI-10185, Locus C | CA-SDI-12881 | |
| CA-SDI-10186, Locus B | CA-SDI-12882 | |

I also agree that the historic component of CA-SDI-14086/H is ineligible for the NRHP due to lack of a subsurface deposit and the inability to place the trash scatter into the Otay Mesa historical context.

In considering the NRHP eligibility of any property, all the criteria defined by 36 CFR Part 60.4 need to be considered. In general, the HPSR and the reports attached to it skipped to criterion D. In the future, please clearly address all of the criteria for eligibility.

**FINDING OF EFFECT**

You have determined that implementation of the undertaking will have No Adverse Effect on CA-SDI-11424. You have justified this finding by suggesting

that effects of the undertaking that would otherwise be adverse will not be adverse if the following measures are implemented:

- Redesign of the proposed roadway to avoid impacting the identified, intact, significant subsurface deposits within site CA-SDI-11424.

- Monitoring of construction activities within the vicinity of site CA-SDI-11424 by a qualified archaeologist.

I have considered the foregoing recommendations and find that they are sufficient to warrant my concurrence in your no adverse effect determination if you agree to impose them as conditions on the undertaking [36 CFR § 800.5(b)]. You may indicate your agreement by executing the signature block below. My receipt of a copy of this letter bearing your signature will constitute satisfactory evidence of Section 106 compliance by the FHWA for this undertaking.

Your consideration of historic properties in the project planning process is appreciated. Should you have any questions, please contact staff archaeologist Charles Whatford by telephone at (916) 653 – 2716 or via email cwhat@ohp.parks.ca.gov

Sincerely,

M Greenberg for

Daniel Abeyta, Acting
State Historic Preservation Officer

AGREED: David A. Nail for Jeffrey Lindley DATE 12/27/99
Division Administrator
Federal Highway Administration

# APPENDIX J

COUNTY OF SAN DIEGO FLOODPLAIN LETTER

# County of San Diego

DEPARTMENT OF PUBLIC WORKS

JOHN L. SNYDER
DIRECTOR

5555 OVERLAND AVE, SUITE 2188
SAN DIEGO, CALIFORNIA 92123-1295

(858) 694-2212 FAX: (858) 268-0461
Web Site: sdcdpw.org

July 3, 2007

Mr. Tim Brownson
District Hydraulic Engineer
California Department of Transportation – District 11
4050 Taylor Street
San Diego, CA 92110

FLOODPLAIN IMPACT ASSESSMENT OF PROPOSED OTAY MESA EAST POE AND SR-11

Dear Mr. Brownson:

We have reviewed your letter of May 14, 2007, requesting our endorsement of your conclusion that there is no need for a Floodplain Impact Assessment of the proposed Otay Mesa East POE and SR-11.

The subject proposed project as depicted on Exhibit 2A is partially located within the FIRM No. 06073C2183F, which determined the area as Zone X outside the 500-year floodplain. Therefore, we concurred with your conclusion that the subject proposed project does not require a Floodplain Impact Assessment.

However, with regard to flood management in East Otay Mesa all developments are subject to guidelines of the County's East Otay Mesa Specific Plan Comprehensive Flood Control Master Plan 1994. Essentially, developments within East Otay Mesa area are required to provide local or regional detention basins.

If you have any questions or need additional information, please contact me at (858) 694-3672 or by email Cid.Tesoro@sdcounty.gov.

Sincerely,

CID TESORO, Manager
Watershed Protection Program

CT/ez

cc: Hung Tran, Department of Public Works, MS 0384

# APPENDIX K

## WORKSHEET A: REASONABLE ALLOWANCE CALCULATION FOR NOISE ABATEMENT BASED ON CRITICAL DESIGN RECEIVER

**Worksheet A**
**Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver**

| **Base Allowance** | | | | |
|---|---|---|---|---|
| Base Year | 2008 | | | $31,000 |
| **1) Absolute Noise Levels** | | | Check One | |
| 69 dBA or less: | Add: | $2,000 | | $0 |
| 70-74 dBA: | Add: | $4,000 | √ | $4,000 |
| 75-78 dBA: | Add: | $6,000 | | $0 |
| More than 78 dBA: | Add: | $8,000 | | $0 |
| **2) Build vs. Existing Noise Levels[1]** | | | Check One | |
| Less than 3 dBA: | Add: | $0 | √ | $0 |
| 3-7 dBA: | Add: | $2,000 | | $0 |
| 8-11 dBA: | Add: | $4,000 | | $0 |
| 12 dBA or more: | Add: | $6,000 | | $0 |
| **3) Achievable Noise Reduction** | | | Check One | |
| Less than 6 dBA: | Add: | $0 | √ | $0 |
| 6-8 dBA: | Add: | $2,000 | | $0 |
| 9-11 dBA: | Add: | $4,000 | | $0 |
| 12 dBA or more: | Add: | $6,000 | | $0 |
| **4) New Construction Or Pre 1978 residences?** (Choose Yes or No) | | | | |
| YES on either one: | Add: | $10,000 | | $0 |
| NO on both: | Add: | $0 | √ | $0 |
| **Reasonable Allowance Per Residence** | | | | $35,000 |
| **Unmodified Barrier Allowance** | | | | $105,000 |
| **Adjusted reasonable allowance for Benefitted Residence** | | | | $35,000 |
| **Adjusted Unmodified Barrier Allowance** | | | | $105,000 |

Adjusted reasonable allowance for Residence and Barrier must be rounded up to the nearest $1,000

[1] Build vs. Build-out SR-905 (under construction) Noise Levels
[2] Build-out SR-905 Noise Levels

County: San Diego
Route: SR-905
Post Mile: 570+28/576+18
Project Exp Auth: EA 085780
Program Code:

| | |
|---|---|
| Barrier Name or ID | NB-1 |
| Barrier Height (Feet) | 10 |
| Critical Design Receiver | R-10 |
| Number of benefitted Residences (equivalent) | 3 |
| New Hwy Construction | No |
| Pre 1978 residences | No |
| Existing Noise Levels[2] | 74 dBA |
| Future Noise Levels | 74 dBA |
| Changes in Noise Level | 0 dBA |
| Noise Level with Abatement | 69 dBA |
| Barrier Insertion Loss | 5 dBA |

Continue to Worksheet B

# APPENDIX L

USFWS CONSULTATION LETTER

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To:
FWS-SDG-1803.2

OCT 6 2006

Ms. Deborah Leonard
Helix Environmental Inc.
7578 El Cajon Boulevard, Suite 200
La Mesa, California 91941

Subject: Request for Candidate, Proposed, Threatened, or Endangered Species for the Proposed State Route 11 and East Otay Mesa Port-of-Entry Project, San Diego County, California

Dear Ms. Leonard:

The U.S. Fish and Wildlife Service has reviewed the information provided in your letter dated September 12, 2006, and received at our office on September 13, 2006, to assess the potential presence of federally listed threatened, endangered, or proposed species at the proposed project site. We do not have site specific information for your project area however, to assist you in evaluating whether or not the proposed project may affect listed species, we are providing the attached list of federally listed species that may occur in the general project area. Please note that only general biological information is available for the project area and this may not be a comprehensive list. You should contact the California Department of Fish and Game for State-listed and other sensitive species that may occur in the area of the proposed project. Please note that State-listed species are protected under the provisions of the California Endangered Species Act. We recommend that you seek assistance from a biologist familiar with the project site, and experienced in assessing the potential for direct, indirect, and cumulative effects to species and their habitats likely to result from the proposed activity.

If it is determined that the proposed project may affect a listed or proposed species, or designated or proposed critical habitat, consultation (or conference for proposed species) with the Service pursuant to section 7 of the Endangered Species Act (Act) of 1973, as amended, should be initiated. Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation.

Should you have any questions regarding the species on the enclosed list or your responsibilities under the Act, please call Kurt Roblek of my staff at (760) 431-9440, extension 308.

Sincerely,

Therese O'Rourke
Assistant Field Supervisor

Cc: Susanne Glasgow, Caltrans District 11
Steve Healow, FHWA
Susan Wynn, USFWS

Federally Listed Species Which Occur or May Occur
Within the Project Site of the Proposed
State Route 11 and East Otay Port-of-Entry Project

| Common Name | Scientific Name | Status |
|---|---|---|
| PLANTS | | |
| San Diego thornmint | *Acanthomintha ilicifolia* | T |
| Otay tarplant | *Deinandra conjugens* | T, CH |
| San Diego button celery | *Eryngium aristulatum* var. *parishii* | E |
| willowy monardella | *Monardella linoides* ssp. *viminea* | E |
| Otay Mesa mint | *Pogogyne nudiuscula* | E |
| BIRDS | | |
| southwestern willow flycatcher | *Empidonax traillii extimus* | E, CH |
| coastal California gnatcatcher | *Polioptila californica californica* | T, CH |
| least Bell's vireo | *Vireo bellii pusillus* | E, CH |
| INVERTEBRATES | | |
| San Diego fairy shrimp | *Branchinecta sandiegonensis* | E, CH |
| Quino checkerspot butterfly | *Euphydryas editha quino* | E, CH |
| Riverside fairy shrimp | *Streptocephalus wootoni* | E, CH |
| AMPHIBIANS | | |
| arroyo toad | *Bufo californicus* | E, CH |

E: Endangered T: Threatened CH: Critical Habitat

# APPENDIX M

CEQA CHECKLIST

## CEQA Environmental Checklist

| 11-SD-11 and 11-SD-905 | 0.0/2.8 and R8.4/10.1 | 056310 |
|---|---|---|
| Dist.-Co.-Rte. | P.M/P.M. | E.A. |

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **I. AESTHETICS**: Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista | ☒ | ☐ | ☐ | ☐ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway | ☐ | ☐ | ☒ | ☐ |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☒ | ☐ | ☐ |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☒ | ☐ | ☐ |
| **II. AGRICULTURE AND FOREST RESOURCES**: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☒ | ☐ |
| **III. AIR QUALITY**: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☒ | ☐ |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☐ | ☒ | ☐ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | ☐ | ☐ | ☒ | ☐ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |
| **IV. BIOLOGICAL RESOURCES**: Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☒ | ☐ | ☐ |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☒ | ☐ | ☐ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☒ | ☐ | ☐ |
| **V. CULTURAL RESOURCES**: Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | ☐ | ☐ | ☒ | ☐ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☐ | ☒ | ☐ |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☒ | ☐ | ☐ |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☐ | ☒ | ☐ |
| **VI. GEOLOGY AND SOILS**: Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | ☐ | ☐ | ☒ | ☐ |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? | ☐ | ☐ | ☒ | ☐ |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| iv) Landslides? | ☐ | ☐ | ☒ | ☐ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☒ | ☐ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☒ | ☐ |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ |

**VII. GREENHOUSE GAS EMISSIONS**: Would the project:

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

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

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

**VIII. HAZARDS AND HAZARDOUS MATERIALS**: Would the project:

| | | | | |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☒ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☒ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☒ | ☐ |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☒ | ☐ |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☒ | ☐ |

**IX. HYDROLOGY AND WATER QUALITY**: Would the project:

| | | | | |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☒ | ☐ |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☐ | ☒ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | ☐ | ☐ | ☐ | ☒ |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☒ | ☐ |
| f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☒ |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | ☒ |
| j) Inundation by seiche, tsunami, or mudflow | ☐ | ☐ | ☐ | ☒ |

**X. LAND USE AND PLANNING**: Would the project:

| | | | | |
|---|---|---|---|---|
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☒ | ☐ |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | ☐ | ☒ | ☐ | ☐ |

**XI. MINERAL RESOURCES**: Would the project:

| | | | | |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | ☐ | ☐ | ☐ | ☒ |

**XII. NOISE**: Would the project result in:

| | | | | |
|---|---|---|---|---|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☒ | ☐ |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☒ | ☐ |
| ) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☒ | ☐ |
| **XIII. POPULATION AND HOUSING**: Would the project: | | | | |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | ☐ | ☐ | ☒ | ☐ |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| **XIV. PUBLIC SERVICES**: | | | | |
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | ☐ | ☐ | ☒ | ☐ |
| Fire protection? | ☐ | ☐ | ☒ | ☐ |
| Police protection? | ☐ | ☐ | ☒ | ☐ |
| Schools? | ☐ | ☐ | ☐ | ☒ |
| Parks? | ☐ | ☐ | ☐ | ☒ |
| Other public facilities? | ☐ | ☐ | ☐ | ☒ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XV. RECREATION**: | | | | |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |
| **XVI. TRANSPORTATION/TRAFFIC**: Would the project: | | | | |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | ☒ | ☐ | ☐ | ☐ |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☒ | ☐ |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☐ | ☒ |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ |
| e) Result in inadequate emergency access? | ☐ | ☐ | ☒ | ☐ |
| f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | ☐ | ☐ | ☐ | ☒ |
| **XVII. UTILITIES AND SERVICE SYSTEMS**: Would the project: | | | | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☒ | ☐ |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☒ | ☐ |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☒ | ☐ |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☒ | ☐ |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ |

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

| | | | | |
|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☒ | ☐ | ☐ |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☒ | ☐ | ☐ | ☐ |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☒ | ☐ | ☐ | ☐ |

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