State Route 76
South Mission Road to Interstate 15
Highway Improvement Project

SAN DIEGO COUNTY, CALIFORNIA
DISTRICT 11 – SD – 76; PM 12.1/17.7; I-15: 46.1/47.3
EA 257110
PIN: 1100000189

Final Environmental Impact Report/ Environmental Impact Statement

Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

January 2012

General Information about This Document

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It should be noted that at a future date the Federal Highway Administration, on behalf of the California Department of Transportation, may publish a notice in the Federal Register, pursuant to 23 USC Section 139(l), indicating that a final action has been taken on this project. If such notice is published, a lawsuit or other legal claim will be barred unless it is filed within 180 days after the date of publication of the notice (or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed). If no notice is published, then the lawsuit or claim can be filed as long as the periods of time provided by other federal laws that govern claims are met.

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State Route 76 South Mission Road to Interstate 15 Highway Improvement Project
San Diego County, California

FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT

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

THE STATE OF CALIFORNIA
Department of Transportation

COOPERATING AGENCIES
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency

RESPONSIBLE AGENCIES
California Department of Fish and Game
California Transportation Commission
County of San Diego
Regional Water Quality Control Board – Region 9

1/5/2012
Date of Approval

for Laurie Berman
District 11 Director
California Department of Transportation
NEPA Lead Agency

1/5/2012
Date of Approval

for Laurie Berman
District 11 Director
California Department of Transportation
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Abstract: The proposed project would widen and realign State Route 76 (SR-76) in northern San Diego County from South Mission Road in Bonsall to just east of the Interstate 15 interchange, including interchange improvements. The proposed project covers a distance of approximately 5.6 miles. Within the proposed project limits, SR-76 is a conventional highway with two lanes, nonstandard shoulders, and signalized at-grade intersections. The alternatives under consideration are the Existing Alignment Alternative, the Southern Alignment Alternative, and the No Build Alternative. The Existing Alignment Alternative with partial cloverleaf interchange configuration (identified as DV-1 in the Project Report) has been identified as the Preferred Alternative. Potential benefits include maintaining or improving the existing and future traffic operations in the SR-76 corridor and improving the safe and efficient local and regional movement of people and goods. Potential project impacts include Land Use, Growth, Relocations and Real Property Acquisitions, Visual/Aesthetics, Cultural Resources, Hydrology and Floodplains, Paleontology, Hazardous Waste/Materials, Natural Communities, Wetlands and other Waters, Animal Species, Threatened and Endangered Species, and Cumulative Impacts.

SUMMARY

INTRODUCTION

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project are being, or have been, carried out by the California Department of Transportation (Caltrans) under its assumption of responsibility pursuant to 23 U.S. Code (USC) 327.

The draft document has been revised based on input received during the public comment period (September 3, 2010, through November 2, 2010). These revisions are indicated by a line in the margin. Copies of comments received in response to the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) are included in Appendix M.

Statute of Limitations

It should be noted that at a future date the Federal Highway Administration (FHWA), on behalf of Caltrans, may publish a notice in the Federal Register, pursuant to 23 USC Section 139(l), indicating that a final action has been taken on this project. If such notice is published, a lawsuit or other legal claim will be barred unless it is filed within 180 days after the date of publication of the notice (or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed). If no notice is published, then the lawsuit or claim can be filed as long as the periods of time provided by other federal laws that govern claims are met.

S.1 OVERVIEW OF THE PROJECT AREA

The proposed project is located in northern San Diego County, California, on State Route 76 (SR-76) from South Mission Road to just east of the Interstate 15 (I-15) interchange. The proposed project would widen and realign SR-76 and improve the SR-76/I-15 interchange within the communities of Bonsall and Fallbrook. The proposed project covers a distance of approximately 5.6 miles. Within the proposed project limits, SR-76 is currently a conventional highway with two lanes, nonstandard shoulders, and signalized at-grade intersections. The proposed highway improvement project would widen SR-76 from two to four lanes and would include six signalized intersections along the alignment. (Since release of the Draft EIR/EIS and in response to comments, additional traffic studies have shown that a signal is now warranted at Via Monserate; therefore, the Existing Alignment Alternative (Preferred Alternative) would include a signalized intersection at this location). Additionally, the project proposes to modify the SR-76/I-15 interchange to a partial cloverleaf configuration by adding two loop on-ramps, realigning and widening the existing on- and off-ramps, and widening the bridge structure over I-15. The project proposes to modify the existing Park and Ride facility, located north of SR-76 between Old Highway 395 (a County road) and the southbound I-15 off-ramp. An area south of SR-76, between Old Highway 395 (a County road) and the southbound I-15 on-ramp, is also evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way.

The project study area includes unincorporated areas of northern San Diego County and is defined by the San Luis Rey River Valley, including the lower slopes of the river valley to the north and south, between South Mission Road to just east of I-15. The northern portion of the study area is within the unincorporated community of Fallbrook and the southern and far

western portions of the project study area are within the unincorporated community of Bonsall. The project study area includes the existing SR-76 roadway, which runs along the northern edge of the floodplain of the San Luis Rey River between South Mission Road and I-15.

The project area consists of open space; agricultural fields (including ornamental fields); avocado and citrus groves; horse breeding and training facilities; horse pastures; scattered commercial developments; and some residential properties. The San Luis Rey River, which runs parallel and to the south of the existing SR-76 alignment, supports several areas of riparian habitat that are considered important for the preservation of sensitive vegetation and wildlife. Development within the study area is limited to a large extent by the large floodplain area of the San Luis Rey River Valley and upland areas to the north and south, which are mostly built out with large-lot homes. The project area also includes the southern side of the San Luis Rey River Valley along the southern edge of the floodplain of the San Luis Rey River, as well as the floodplain itself.

Another major action recently approved by Caltrans and currently under construction in the same geographic area is the SR-76 Melrose Drive to South Mission Road Highway Improvement Project. The Record of Decision for the SR-76 Melrose Drive to South Mission Road Final EIR/EIS was issued on March 2, 2009. The purpose of that project is to maintain or improve existing and future traffic operations in that section of the SR-76 corridor.

Pursuant to the San Diego Association of Government's (SANDAG) 2004 TransNet Sales Tax Extension Ordinance, the SR-76 project should implement the objective of the "net benefit" mitigation standard. SR-76 was one of three highway expansions where the TransNet Ordinance indicates that "direct and indirect impacts to sensitive plant and animal populations, and to the function of the wildlife corridors, should be mitigated in order to produce an on-site 'net benefit' to species and to the movement of wildlife." Furthermore, the Ordinance states that the net benefit "will require a comprehensive baseline analysis of existing and future conditions, adoption of measures to mitigate direct and indirect impacts to species, adoption of measures to accommodate species-specific wildlife movement through the corridors, and implementation of capital project designs that can reduce impacts." The proposed project would include elements such as wildlife crossings, directional wildlife fencing, habitat restoration, and land acquisitions to support wildlife habitat connectivity. The net benefit mitigation is intended to go above and beyond that required by the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or other resource agency permits.

Objectives to implement this goal include (1) land acquisition for biological mitigation and increased long-term connectivity, (2) floodplain/riparian restoration, (3) enhanced/new wildlife crossings, (4) water-quality improvement activities, and (5) species-specific enhancement (e.g., arroyo toad and San Diego ambrosia).

S.2 PURPOSE AND NEED

The purpose of the proposed project is to maintain or improve the existing and future traffic operations in the SR-76 corridor between South Mission Road to just east of I-15 in order to improve the safe and efficient local and regional movement of people and goods while minimizing environmental and community impacts for the planning design year 2030.

The objectives of this project are the following:

- Maintain or improve future traffic levels of service in 2030 over the existing levels of service;
- Maintain or improve travel times within the corridor;
- Improve safety conditions for motorists and the general public along the corridor;
- Provide a facility that is compatible with future transit and other modal options;
- Provide consistency with the 2030 and recently adopted 2050 Regional Transportation Plan (RTP), the current transportation plan for the San Diego region, where feasible and in compliance with federal and state regulations;
- Maintain the area as an effective link in the intraregional and interregional movement of people and goods, including facilitating the east-to-west movement of vehicles traveling south from Riverside County to areas along the SR-76 corridor such as Fallbrook or Bonsall, or coastal communities such as Oceanside;
- Protect and/or enhance the human and natural environment along the SR-76 corridor;
- Implement aspects of “net benefit” as required by TransNet and agreed upon by the resource agencies during the development of the Draft EIR/EIS and Final EIR/EIS;
- Protect and maintain community character and cohesion and the rural landscape within the corridor; and
- Accommodate existing and proposed equestrian and hiking trail connections where feasible and in compliance with federal and state regulations.

The project is needed in response to (1) local and regional congestion that has resulted from current and future (projected) population growth, increased residential development, and increased commercial development primarily within areas surrounding the corridor; (2) the constraints of the existing roadway system, which limit the ability of the facility to operate efficiently; (3) the congested nature of the existing facility; and (4) the need to have the facility meet the current design standards of Caltrans.

S.3 PROPOSED PROJECT

The proposed project is located in an unincorporated area of northern San Diego County, California, on SR-76 from South Mission Road in Bonsall to just east of the I-15 interchange in Fallbrook. The proposed project is to widen, realign, and make associated roadway improvements to SR-76 between South Mission Road and just east of I-15. The project proposes to construct associated roadway improvements to current Caltrans design standards. SR-76 is currently a two-lane conventional highway that is over capacity and subject to traffic congestion and travel delays. The proposed project is approximately 5.6 miles long and would be constructed as a four-lane facility. Additionally, the project proposes to modify the SR-76/I-15 interchange to a partial cloverleaf configuration by adding two loop on-ramps, realigning and widening the existing on- and off-ramps, and widening the bridge structure over I-15. The project proposes improvements to the Park and Ride facility located north of SR-76 between Old Highway 395 and the southbound I-15 off-ramp (see Chapter 2, Figures 2.1-2a through 2.1-5). An area south of SR-76, between Old Highway 395 (a County road) and the southbound I-15 on-ramp, is also evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way.

South Mission Road was chosen as a logical beginning for the western end of the proposed project due to the difference in traffic demands along SR-76 east and west of South Mission Road. Traffic demand along SR-76 east of South Mission Road is lower due to many commuter trips originating and terminating in Fallbrook. Just east of the SR-76/I-15 interchange was chosen as a logical eastern terminus due to decreased traffic demand immediately east of the SR-76/I-15 interchange. The crossing over the interchange connects the four-lane facility recently constructed by others east of I-15 with this proposed four-lane facility to the west. The majority of the traffic traveling east of I-15 on SR-76 accesses the highway from either the I-15 southbound or northbound off-ramps.

In addition to the No Build Alternative, two build alternatives are proposed: the Existing Alignment Alternative, identified as the Preferred Alternative, and the Southern Alignment Alternative. From South Mission Road to just east of I-15, each roadway alternative would construct a four-lane facility. There would be two lanes in each direction, and each lane would be 12 feet wide. The eastbound and westbound lanes would be separated by a varying width median (29-foot typical width). There would be a minimum 5-foot-wide paved inside shoulder and a 10-foot-wide paved outside shoulder in each direction. The outside shoulders would serve the uses of bicycles, pedestrians, and emergency parking. Six signalized intersections would occur at specific locations along each alignment alternative for local access. Channelization lanes at specific intersections would be constructed to improve intersection operation.

As stated above, both alternatives include design improvements to the SR-76/I-15 interchange and improvements to the Park and Ride facility northwest of the SR-76/I-15 interchange; the area south of SR-76, between Old Highway 395 (a County road) and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way.

There are two SR-76 and I-15 interchange build design variations. The first interchange design variation is a partial cloverleaf configuration (identified as Design Variation 1 [DV-1] in the Project Report), which, with the Existing Alignment Alternative, has been identified as the Preferred Alternative. This interchange design option would widen the existing three-lane bridge structure to four lanes, two in each direction, with channelization lanes at each of the ramp intersections; add two loop on-ramps; and widen and upgrade the existing on- and off-ramps to meet current Caltrans design standards. Two-lane on-ramps are proposed with this design, with one lane designated as a high-occupancy vehicle (HOV) lane. This design would also include the addition of a 1,000-foot auxiliary lane to northbound I-15. Interchange build design variations are shown in the typical cross sections in Figures 2.1-1b, 2.1-4, and 2.1-5. This interchange requires a Modified Access Agreement from FHWA (Appendix N).

The second interchange design variation is a spread diamond configuration (identified as Design Variation 2 [DV-2] in the Project Report). This design option would widen the existing three-lane bridge over I-15 to a four-lane bridge with dual eastbound and westbound left-turn lanes, with added channelization lanes leading to the diamond on-ramps, for a total of eight lanes. This design would also improve the existing on- and off-ramps to meet current Caltrans design standards. Two-lane on-ramps, with one lane designated as an HOV lane, are proposed with this interchange design. This design would also include the addition of a 1,000-foot auxiliary lane to northbound I-15. Interchange build design variations are shown in the typical cross sections, Figures 2.1-1b, 2.1-4, and 2.1-5.

Existing Alignment Alternative (Preferred Alternative)

The proposed Existing Alignment Alternative (Preferred Alternative) would follow the existing SR-76 to the maximum extent possible along the northern edge of the San Luis Rey River Valley. With this proposed alternative, the existing conventional highway would be expanded to four lanes, two eastbound and two westbound. The typical roadway width from edge of shoulder to edge of shoulder would be 93 feet. This alternative meets the purpose and need, provides an economical construction cost, and balances impacts to the sensitive environmental resources and the private property located along the corridor. The length of widening along SR-76 would be approximately 5.6 miles. Earthwork quantities are estimated to be 130,000 cubic yards of cut and 910,000 cubic yards of fill.

Design features and elements that deviate from the mandatory or advisory design standards provided in the Highway Design Manual require a design exception, which documents the engineering decisions leading to the approval of each exception. Mandatory design exceptions are approved through Caltrans Headquarters Project Development Coordinator, as delegated by the Chief, Division of Design. Approval of advisory design exceptions has been delegated to the District Directors. To minimize environmental impacts, a design exception is being requested to allow a slope rate of 2:1 in fill sections. The project design would be context-sensitive, recognizing the rural character of the adjacent communities. For an explanation of the identification of the preferred alternative please refer to Section S.4.

Between South Mission Road and I-15, the proposed alignment is primarily located along the existing roadway alignment, but shifts north or south in specific locations to provide for more gradual curves to accommodate a higher design speed and enhanced safety features. At-grade, signalized intersections would be provided at six locations: South Mission Road, Via Monserate, Gird Road, Old Highway 395 (a County road), the I-15 southbound ramps, and the I-15 northbound ramps. Construction of these signalized intersections would include standard safety lighting. Safety lighting at these intersections would be the only lighting provided as part of the project. Left-turn channelization and median openings would be provided at two unsignalized intersections: Sweetgrass Lane and Star Track Way/Sage Road. A detention basin would be constructed along the existing alignment at the western side of the intersection of SR-76 and Ramona Drive. A fence between the San Luis Rey River and the Existing Alignment Alternative (Preferred Alternative) would be placed along the edge of the right-of-way except where it directs wildlife to undercrossing locations. Two-lane on-ramps are proposed for the SR-76/I-15 interchange, with one lane designated as an HOV lane, and a 1,000-foot auxiliary lane is proposed at the northbound on-ramps.

The existing bridge structure over I-15 would be widened by approximately 54 feet to the south, which would include extending the abutments and adding columns to support the construction. The widening would consist of building a new bridge adjacent to the existing approximately 64-foot-wide bridge. The proposed bridge structure would match the existing structure. The hexagonal flared columns would maintain the same shape and appearance of the existing columns; aside from these columns, no other architectural treatment is anticipated for the proposed structure.

As part of the net environmental benefit goals, directional wildlife fencing extending the length of the alignment on both sides would be put in place. Wildlife escape areas would be incorporated into the wildlife fencing at intervals. In addition, underpasses used along the roadway to facilitate drainage would be modified to facilitate wildlife movement. Dimensions of wildlife crossings vary for the various focal species. For larger mammals, a minimum 8-x-10-foot

underpass bridge or box culvert bridge is the proposed size. Minimum 5-x-5-foot dimension for culverts are proposed for medium sized animals, and less than 5-x-5-foot culvert dimensions for smaller sized animals.

The estimated cost of construction for the Existing Alignment Alternative (Preferred Alternative), including improvements to the I-15 interchange using the partial cloverleaf (DV-1) interchange design variation, would be approximately $201 million (construction: $137 million; right-of-way: $17 million; support: $45 million; biological mitigation: $53 million). The estimated cost of construction for the Existing Alignment Alternative (Preferred Alternative), including improvements to the interchange using the spread diamond (DV-2) interchange design, would be approximately $206 million (construction: $101 million; right-of-way: $17 million; support: $35 million; biological mitigation: $53 million).

Southern Alignment Alternative

The Southern Alignment Alternative would be mostly located south of the San Luis Rey River, although the western and eastern ends of the alignment would be similar to or the same as the Existing Alignment Alternative (Preferred Alternative). As with the Existing Alignment Alternative (Preferred Alternative), the facility would have four lanes. The total roadway width from edge of shoulder to edge of shoulder would typically be 93 feet. The Southern Alignment Alternative would require two new bridges crossing the San Luis Rey River, the first just east of South Mission Road and the second near Star Track Way.

The westbound and eastbound lanes would be separated by a varying-width median. Preliminary earthwork quantities are currently estimated to be 20,000 cubic yards of cut with 990,000 cubic yards of fill. To minimize environmental impacts, a design exception is being requested to allow a slope rate of 2:1 in fill sections. The project design would be context-sensitive, recognizing the rural character of the adjacent communities. Left-lane channelization would be provided at the following intersections: South Mission Road, Frontage Road (West), Frontage Road (East), Old Highway 395, the I-15 southbound ramps, and the I-15 northbound ramps.

At-grade, signalized intersections would be provided at the western and eastern intersections of the frontage road, Old Highway 395, South Mission Road, the I-15 southbound ramps, and the I-15 northbound ramps. Construction of these signalized intersections would include standard safety lighting. The safety lighting at these intersections would be the only lighting provided as a part of the project. A fence between the San Luis Rey River and the Southern Alignment Alternative would be placed along the edge of the right-of-way except where it directs wildlife to undercrossings.

The first proposed river crossing (just east of South Mission Road) consists of an eight-span concrete box girder bridge, which would span over the 100-year floodplain of the San Luis Rey River (Figure 2.1-3a). The cast-in-place structure would be built on falsework erected in the floodplain during the dry season. The finished bridge would have a length of approximately 1,332 feet, carrying two lanes of traffic in each direction. Rock slope protection (RSP) would likely be required to protect the bridge abutments and approach roads against scour. This bridge would be supported on 16-inch cast-in drilled-hole concrete piles. The second proposed river crossing (near Star Track Way) consists of a four-span concrete box girder bridge that would span over the 100-year floodplain of the San Luis Rey River (see Figure 2.1-3f). The cast-in-place structure would be built on falsework erected in the floodplain during the dry season. The finished bridge would have a length of 780 feet, carrying two lanes of traffic in each

direction. RSP would likely be required to protect the bridge abutments and approach roads against scour. This bridge would be supported on 16-inch cast-in drilled-hole concrete piles.

As part of the net environmental benefit goals, directional wildlife fencing extending the length of the alignment on both sides would be put in place. In addition, underpasses used along the roadway for drainage would be modified to facilitate wildlife movement. The two proposed new open span bridges discussed above would also facilitate wildlife movement. One of the proposed underpasses would accommodate pedestrians and would allow the private owner of the property to access both sides of the parcel. In addition, directional wildlife fencing extending the length of the alignment on both sides would be put in place.

Under the Southern Alignment Alternative, the existing SR-76 roadway would be relinquished to the County of San Diego per a revised Freeway Agreement and would function as a frontage road for existing property and business access. As a County road, it would be maintained by the County. Caltrans would coordinate with the County during design to ensure any relinquished roadways were in good repair. Section 73 of the Streets and Highways Code requires that the "highway" must be placed in a "state of good repair" prior to relinquishment of routes and also specifies "state of good repair" shall not obligate Caltrans for widening, new construction, or for major reconstruction, unless specifically directed by the California Transportation Commission. Under the Southern Alignment Alternative, it is unknown if the County would provide wildlife crossings on the current roadway. Under the Southern Alignment Alternative, the net benefit to wildlife movement would be two bridges at the river crossings (allowing east/west wildlife movement within the riparian area), and wildlife fencing and crossings in the form of culverts along the southern alignment (allowing north/south movement).

Any upgrade to the current SR-76 by the County would be reviewed and approved under a separate environmental process.

Construction costs for the Southern Alignment Alternative with the partial cloverleaf (DV-1) interchange design variation would be approximately $322 million (construction: $133 million; right-of-way: $94 million; support: $42 million; biological mitigation: $53 million). Construction costs for the Southern Alignment Alternative with the spread diamond (DV-2) interchange design variation would be approximately $319 million (construction: $130 million; right-of-way: $94 million; support: $42 million; biological mitigation: $53 million).

No Build Alternative

The "No Build" alternative represents the option of no action. Under the No Build Alternative, no new SR-76 facilities would be constructed and the existing SR-76 would continue to serve as the principal access between South Mission Road and I-15. This alternative would not propose any changes to the existing number of lanes or the configuration of existing intersections along the corridor. The No Build alternative would not provide for any environmental or habitat enhancement funded by TransNet funds because the provisions of the ordinance tie those enhancement funds to transportation projects.

S.4 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The Existing Alignment Alternative (Preferred Alternative) would have the least overall environmental impacts, meets the proposed project's purpose and need, meets current Caltrans design requirements, and is supported by resource agencies. Due in part to comments received as a result of the Draft EIR/EIS circulation, the Project Development Team (PDT) identified the

Existing Alignment Alternative, including the SR-76/I-15 partial cloverleaf Interchange design variation (DV-1), as the Preferred Alternative.

Existing Alignment Alternative (Preferred Alternative)

In April 2006, Caltrans signed an interagency Memorandum of Understanding (MOU) committing to integrate NEPA and Section 404 of the Clean Water Act (CWA) into transportation planning, programming, and implementation stages for federal aid surface transportation projects requiring a permit under Section 404. In September 2008, Caltrans began coordination efforts with federal and state resource and regulatory agencies, including the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (USEPA), National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), California Department of Fish and Game (CDFG), and Regional Water Quality Control Board (RWQCB), who were invited to participate in discussions to implement the MOU. The integration process comprises three checkpoints, which punctuate ongoing coordination efforts. These checkpoints are (a) Purpose and Need; (b) Identification of the Range of Alternatives, the range of alternatives checkpoint also includes consideration of the criteria used to select and analyze the range of alternatives to be studied in the draft EIS; and (c) Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) Determination and Conceptual Mitigation Plan. The response will be a comment, agreement or disagreement. Additionally, USACE may submit a concurrence or non-concurrence at the LEDPA checkpoint. The response terms (comment, agree, disagree; and for USACE, concur/non-concur) reflect the regulatory responsibilities of the responding agencies at different points in the NEPA and CWA Section 404 processes.

The Existing Alignment Alternative, identified as the Preferred Alternative, was presented to the resource and regulatory agencies at the January 26, 2011, NEPA 404 meeting. Letters were then submitted to the resource and regulatory agencies for their concurrence on the Preferred Alternative. Concurrence letters were received from the agencies in March and April of 2011.

This EIR/EIS finds that the Existing Alignment Alternative would have no substantial adverse impacts after mitigation. The Southern Alignment Alternative, after mitigation, would have remaining substantial adverse impacts on land use, growth, community character and cohesion, and relocations and real property acquisitions. The following additional factors were considered in the Preferred Alternative identification process.

- The Existing Alignment Alternative would also be a more cost-effective solution to the proposed project's purpose and need. The total estimated cost for the Preferred Alternative is $201 to 206 million, compared to $319 to $322 million for the Southern Alignment Alternative. The SR-76 Financial Plan is being prepared for submittal to FHWA in approximately March 2012.

- Although the Southern Alignment Alternative would permanently impact less acreage of sensitive vegetation (Table S-1 at the end of this Summary), the Existing Alignment Alternative would have less effect on the functions and values of the remaining sensitive vegetation. The Southern Alignment Alternative would also result in additional potential impacts associated with upgrading the existing SR-76 to good repair, and would affect an area of greater biological diversity in which there is little development and no major roads paralleling the river.

- The Existing Alignment Alternative would be entirely on the northern side of the river where there is existing rural residential development and would not cross the river. The Southern Alignment Alternative would cross the river in two places, introducing noise, light, and glare to the riparian corridor and decreasing ecosystem stability. The Existing Alignment Alternative would not affect the ecosystem south of the river.

- Both alternatives would incorporate measures designed to allow wildlife to safely cross the highway. The Existing Alignment Alternative would follow the existing wildlife barrier created by the current SR-76 roadway to the maximum extent possible, but it would increase the width of this wildlife barrier. The Southern Alignment Alternative would create a new barrier to wildlife movement, in addition to the current SR-7 6 roadway, where none exists now.

- The Existing Alignment Alternative would encroach into less of the San Luis Rey River 100-year floodplain than the Southern Alignment Alternative (55.9 acres vs. 79.8 acres) and have less effect on the water surface elevation in the event of a 100-year flood (a rise of 3.0 inches vs. 6.7 inches).

- The Existing Alignment Alternative would follow the route of existing SR-76 as much as possible through areas of semirural residential development. The Southern Alignment Alternative would create a new major roadway south of the river, in an area designated by the County for very low density development, while leaving existing SR-76 in place north of the river. Greater indirect impacts to sensitive habitats and the rural community character would occur.

- The Existing Alignment Alternative would have fewer impacts to wildlife connectivity within a Pre-Approved Mitigation Area (PAMA) of the draft North County Multiple Species Conservation Plan (NCMSCP) than the Southern Alignment Alternative.

- The Existing Alignment Alternative would primarily follow the current SR-76 roadway north of the San Luis Rey River, while the Southern Alignment Alternative would introduce a new transportation corridor south of the river. Both alternatives would result in landform alterations, disturb existing mature vegetation, and add a substantial amount of paved surface area, but the Southern Alignment Alternative would include the construction of new bridge structures along with other associated roadway features in a largely undeveloped area and would result in higher visual impacts. Greater indirect impacts to sensitive habitats and the rural community character would occur.

- The County General Plan Circulation Element shows SR-76 as a major road following the existing alignment. As a new major transportation element south of the San Luis Rey River, the Southern Alignment Alternative is inconsistent with applicable transportation planning documents.

- The Southern Alignment Alternative, by providing access to lands south of the river, could increase pressure to allow development in that area where only very low density development, and no major roads, exist or are planned. Greater indirect impacts to sensitive habitats and the rural community character would occur.

- The Existing Alignment Alternative would cause a smaller increase in velocities of water in the San Luis Rey River channel during flooding. The Existing Alignment Alternative

would not cause existing nonerosive velocities to increase to erosive velocities for either 10-year or 100-year storms. At the two bridge crossings in the Southern Alignment Alternative, columns and abutments could create the potential for nonerosive velocities to increase to erosive velocities.

- The Southern Alignment Alternative would result in greater permanent direct impacts to critical habitat for coastal California gnatcatcher and southwestern arroyo toad, compared to the Existing Alignment Alternative. Overall, the Southern Alignment Alternative is more likely to constrict wildlife movement.

Partial Cloverleaf Interchange Design (DV-1) (Preferred Alternative)

The Preferred Alternative proposes to modify the existing SR-76/I-15 spread diamond configuration to a partial cloverleaf configuration by adding loop on-ramps in the northwest and southeast quadrants of the interchange. The partial cloverleaf interchange design (DV-1) would include widening the existing bridge over I-15 to a six-lane overcrossing, including channelization lanes at each of the ramp intersections. The existing on-ramps and off-ramps would also be realigned and widened to two lanes. A 1,000-foot auxiliary lane to northbound I-15 would be constructed.

Because left turns onto and off the ramps create potential points of traffic conflict, adding loop on-ramps eliminates the need for left turns and would, therefore, increase traffic operation efficiency. In addition, loop ramps provide better long-term flexibility beyond the 2030 design year.

Although the cost of this design variation is higher than the other design variation, the partial cloverleaf interchange represents a more desirable design because it would allow opportunities to improve interchange operation. A partial cloverleaf interchange configuration would provide a substantial improvement in level of service (LOS) when compared to either the current condition or to the spread diamond interchange design variation (DV-2). Also, this design option does not require a design exception for the southbound auxiliary lane, which would be needed for DV-2, and would potentially allow for a narrower footprint on the ramps and cross street. A partial cloverleaf interchange configuration would potentially require less right-of-way off the structure, and preliminary design studies indicate that construction activities may be more easily staged than with a spread diamond interchange.

A partial cloverleaf interchange would require a Modified Access Agreement with FHWA. In April 2011, a preliminary Modified Access Report (MAR) was submitted to FHWA, and a “Finding of Acceptability” letter was obtained from FHWA on May 25, 2011. A final MAR would be submitted after final approval of the Project Report and after the Final EIR/EIS is certified and approved.

S.5 JOINT CEQA/NEPA DOCUMENT

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 NEPA and the lead agency under CEQA. In addition, FHWA’s responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

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, it is quite often the case that a “lower level” document is prepared for NEPA. One of the most commonly seen joint document types is an EIR/EIS.

Following circulation of the Final EIR/EIS, Caltrans 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 whether to issue a Record of Decision (ROD) under NEPA.

S.6 LEDPA IDENTIFICATION

Guidelines under section 404 of the Clean Water Act specify that a permit can be issued for a discharge of dredged or fill material to waters of the United States (U.S.) only if the discharge is determined to be the least environmentally damaging practicable alternative (LEDPA) [40 CFR §230.10 (a)]. When a proposed project requires an individual permit for filling waters of the U.S., an analysis of alternatives must be carried out. For this analysis, the LEDPA generally is the practicable alternative that either avoids waters of the U.S. or impacts the smallest area of waters.

For non-water dependent projects (essentially all surface transportation projects) that require filling of wetlands or other special aquatic sites, which are areas possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. It may be presumed that there are upland alternatives available and that these upland sites are less environmentally damaging. In particular, the “no-build” alternative, and projects that avoid or minimize fill must be carefully analyzed. An alternative with fewer impacts to aquatic resources than the preferred alternative may be eliminated by demonstrating that it has other overriding severe environmental impacts. No discharge of dredged or fill material shall be permitted if it: a) causes or contributes to violations of any applicable State water quality standard; b) jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended (ESA), or results in the likelihood of the destruction or adverse modification of a habitat which is determined to be a critical habitat under the ESA; c) violates any requirement imposed to protect any marine sanctuary. Because a section 404 permit can only be issued for the LEDPA, section 404 compliance usually requires a more detailed and specific analysis of the aquatic impacts of each alternative. The evaluation of alternatives must consider a reasonable range of options that could fulfill the project purpose and need. Reasonable alternatives are those that “are practical or feasible from the technical and economic standpoint and use common sense, rather than simply desirable from the standpoint of the applicant."

The 404 MOU integration process comprises three checkpoints, which punctuate ongoing coordination efforts. These checkpoints are: (a) Purpose and Need; (b) Identification of the Range of Alternatives, the range of alternatives checkpoint also includes consideration of the criteria used to select and analyze the range of alternatives to be studied in the draft EIS; and (c) Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) Determination and Conceptual Mitigation Plan.

In letters to USFWS, USACE, NOAA Fisheries Service, and USEPA dated February 28, 2011, Caltrans asked for concurrence on the selection of the Existing Alignment Alternative as the

preliminary Preferred Alternative and LEDPA. All four of the agencies concurred with Caltrans' selection: USFWS in a letter dated March 22, 2011; USEPA in a letter dated March 25, 2011; NOAA Fisheries Service in a letter dated March 29, 2011; and USACE in a letter dated April 18, 2011. These letters are included in Chapter 5 of this Final EIR/EIS.

Caltrans has prepared and submitted to USACE for concurrence a Section 404(b)(1) Alternatives Analysis supporting the identification of the Existing Alignment Alternative (Preferred Alternative) as the LEDPA (Appendix I). The Existing Alignment Alternative would impact 4.61 acres of waters of the U.S.; the Southern Alignment Alternative would impact 0.20 acre of waters of the U.S. Although it would have greater impacts on waters of the U.S., the Existing Alignment Alternative would have fewer substantial adverse consequences, would have less biological impacts overall, and could have a beneficial effect on remaining wetlands of the San Luis Rey River.

Neither build alternative would have biological resource impacts that could not be mitigated. However, the Southern Alignment Alternative would have impacts on ecosystem integrity and species diversity that would be more adverse than the Existing Alignment Alternative (Preferred Alternative). The San Luis Rey River with its associated riparian habitat has been identified as an important regional wildlife movement corridor, providing connectivity to conservation lands in both Riverside County to the north and coastal areas to the west, including on Marine Corps Base Camp Pendleton. The area in the project vicinity south of the San Luis Rey River is much more open and less developed than the area north of the river, and the existing SR-76 roadway is already a barrier to wildlife movement north of the river. Studies have shown that wildlife crossing to the river valley from the north is characterized by smaller species, with large mammals such as deer and mountain lions more likely south of the river.

Either build alignment could be constructed with engineered wildlife crossings and directional fencing to facilitate safe wildlife crossing of the roadway. Regardless of such measures, however, the Southern Alignment Alternative would construct a substantial barrier between the river and the open areas to the south where there is currently no barrier. The Existing Alignment Alternative (Preferred Alternative) would have greater direct impacts on waters of the U.S. and special aquatic resources. But to the extent that more diverse species and connected habitats within an ecosystem interact for mutual benefit, the Existing Alignment Alternative (Preferred Alternative) could have a more beneficial effect on the functions and values of remaining wetlands and riparian habitats in the river valley, including waters of the U.S. and special aquatic resources, compared to the Southern Alignment Alternative.

The impacts of the alternatives on resources other than biological resources, as identified in this EIR/EIS, are summarized in Section S.7, Project Impacts, below.

S.7 PROJECT IMPACTS

Table S-1 summarizes project impacts by alternative. For detailed information regarding the impacts of each alternative, please see Chapter 3 of this Final EIR/EIS and the associated technical studies.

Impacts Remaining Significant after Mitigation under CEQA

The following sections discuss impacts that are significant under CEQA regardless of the proposed mitigation. More detailed analysis can be found in the respective sections within Chapter 3 of this Final EIR/EIS. The Existing Alignment Alternative (Preferred Alternative) does

not have any impacts remaining significant after mitigation. Impacts remaining significant after mitigation apply to the Southern Alignment Alternative, and are discussed below and in Chapter 4.

Land Use. For a full discussion, refer to Section 3.1, Land Use.

The Southern Alignment Alternative would result in one full property acquisition and multiple partial property acquisitions. The Southern Alignment Alternative would result in displacement of Vessels Stallion Farm. While large portions of Vessels Stallion Farm could remain in agricultural production, introduction of this new roadway would convert agricultural and undeveloped land to roadway uses. Conversion of these land uses within a largely undeveloped area would represent a significant change to the existing land use pattern.

The Southern Alignment Alternative would introduce a new roadway into an undeveloped area and would have impacts to both existing and planned land uses. Mitigation for impacts to existing land uses would be infeasible and remain significant.

Growth. For a full discussion, please refer to Section 3.4, Growth. Growth within the project area would most likely occur without the proposed project or either project alternative. Growth is anticipated in regional plans and projections and is considered an indirect issue related to the proposed project, some of which would not be minimized through alternate project features or design. County of San Diego is the agency with jurisdiction to approve future development and changes to land use.

Implementation of the Southern Alignment Alternative could reduce the cost of development along the proposed alignment by introducing a new roadway and other associated urban features into an undeveloped rural area. Introduction of this new roadway would increase access to the area and increase the likelihood that land designated for preservation in the Draft NCMSCP could be developed. Mitigation for growth-related impacts would be infeasible and impacts would be significant.

Community Character and Cohesion. For a full discussion, refer to Section 3.6, Community Character and Cohesion. The proposed project would result in physical change to the environment. As such, it is appropriate to consider changes to community character and cohesion in assessing the project's effects.

Implementation of the Southern Alignment Alternative would result in the potential displacement of Vessels Stallion Farm, a business that is representative of the rural character of the community. Displacement of Vessels Stallion Farm may cause future development along the southern edge of the San Luis Rey River Valley, which could further degrade the rural character of the surrounding community. Furthermore, implementation of the Southern Alignment Alternative would reduce the visual quality of the community by constructing a new transportation corridor in a largely undeveloped area. Overall, impacts to community character and cohesion would be significant under the Southern Alignment Alternative.

No mitigation is feasible for the impacts associated with introducing a new transportation corridor into a largely undeveloped area. Therefore, impacts to community character and cohesion associated with the Southern Alignment Alternative would be significant.

Relocations and Real Property Acquisition. For a full discussion, refer to Section 3.7, Relocations and Real Property Acquisitions.

Implementation of the Southern Alignment Alternative would result in the potential displacement of Vessels Stallion Farm. This would result in the displacement of an estimated 30 to 50 employees. Because Vessels Stallion Farm is located on agricultural land in cultivation, all facilities associated with Vessels Stallion Farm would have to be relocated, reconstructed, or recultivated on one similarly large continuous property zoned for agricultural uses. Relocation may negatively affect the Vessels Stallion Farm business, which is dependent on proximity to the horse racing circuits using the Del Mar Race Track in San Diego County and the Los Alamitos Race Track in Orange County. In addition to the permanent impacts, the Southern Alignment Alternative would result in right-of-way acquisitions on a parcel that contains a roadside fruit stand and another parcel occupied by Faubus Farms.

Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees would be entitled to moving expenses. However, as discussed above, with the Southern Alignment Alternative, it cannot be concluded that adequate relocation resources exist for Vessels Stallion Farm. Therefore, relocation impacts associated with the Southern Alignment Alternative would remain unmitigable.

Visual/Aethetics (Section 3.11). For a full discussion, refer to Section 3.11, Visual/Aesthetics.

The Southern Alignment Alternative would noticeably compromise the character and scale of the area by introducing a new transportation corridor, coupled with new bridges, guardrails, drainage structures, and other associated construction components, into a largely undeveloped area. These impacts, combined with extensive landform modifications and vegetation removal, would result in substantially reduced visual quality and character. Additionally, the Southern Alignment Alternative would require new bridges spanning the river in two locations, which would have a pronounced negative impact on the integrity of the existing mature riparian vegetation along the riverbed and the open river valley. Although implementation of the mitigation measures described in Section 3.11 would reduce impacts associated with the Southern Alignment Alternative, impacts would remain due to the introduction of a new roadway into an undeveloped, rural area. Therefore, visual impacts associated with the Southern Alignment Alternaive would be substantial.

Impacts Not Significant after Mitigation under CEQA

These impacts would not be significant after the incorporation of the recommended mitigation measures. More detailed analysis can be found in the respective sections within Chapter 3 (as indicated in parentheses below) of this Final EIR/EIS. Impacts not remaining significant are:

Existing Alignment Alternative (Preferred Alternative)

- Visual/Aesthetics (Section 3.11)
- Cultural Resources (Section 3.12)
- Hydrology and Floodplain (Section 3.13)
- Paleontological Resources (Section 3.16)
- Hazardous Waste/Materials (Section 3.17)
- Natural Communities (Section 3.20)
- Wetlands and Waters (Section 3.21)
- Animal Species (Section 3.23)

- Stormwater and Water Quality (Section 3.14)
- Threatened and Endangered Species (Section 3.24)

Southern Alignment Alternative

- Visual/Aesthetics (Section 3.11)
- Cultural Resources (Section 3.12)
- Hydrology and Floodplain (Section 3.13)
- Paleontological Resources (Section 3.16)
- Hazardous Waste/Materials (Section 3.17)
- Natural Communities (Section 3.20)
- Wetlands and Waters (Section 3.21)
- Animal Species (Section 3.23)
- Stormwater and Water Quality (Section 3.14)
- Threatened and Endangered Species (Section 3.24)

S.8 COORDINATION WITH PUBLIC AND OTHER AGENCIES

Chapter 5 discusses the coordination process, including information on public outreach, SAFETEA-LU 6002, consultation and coordination with public agencies, and PDT meetings. As discussed, public outreach included a public scoping meeting (on October 22, 2008) and an Open House meeting (on December 1, 2008) before release of the Draft EIR/EIS, as well as additional meetings and/or presentations with Native American tribes, resource agencies, and the County of San Diego. Additional coordination in accordance with SAFETEA-LU, the NEPA 404 MOU integration process, and other state and federal regulations was conducted. Meetings and/or presentations to local community planning groups, sponsor groups, homeowner's associations, elected officials, and Chambers of Commerce were also held. After release of the Draft EIR/EIS, a public hearing was held (September 23, 2010). See Chapter 5 for details.

Changes since the Draft EIR/EIS

Caltrans received 338 comment letters from resource agencies, Native Americans, and the public in the form of e-mails, comment sheets, petitions, and letters for the SR-76 South Mission to I-15 Draft EIR/EIS. Since the Draft EIR/EIS, there have been refinements to the project design in response to these comments. The project description and features have been revised in Chapter 2. Changes to the project design since the Draft EIR/EIS include the following:

- To reduce impervious surface areas in response to resource agency comments, the previously proposed approximately 12.7-acre area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion by others of the Park and Ride within the Caltrans right-of-way. This new facility is no longer proposed for the initial construction contract; instead, the existing northwestern Park and Ride facility would be expanded by 3 acres.

- The interchange preferred alternative is the partial cloverleaf configuration (identified as DV-1 in the Project Report), which would include channelization lanes to the loop on-ramps. As a result, the SR-76/I-15 overcrossing bridge would be a six-lane bridge.

- A traffic signal is now warranted and would be constructed at Via Monserate, in response to comments received, changing it from the originally proposed restricted access intersection to a signalized intersection. This signal would reduce out-of-direction

travel at this location and U-turn movements for vehicles traveling either east or west to access Via Monserate.

- During project development, slight revisions have been made and documented to the design that required minor changes to the post mile limits for the proposed project. The post miles at the westerly end of the project limits along SR-76 were previously 12.4, however, to include the Tabata mitigation site as a designated “mandatory borrow site” for fill to be used during project construction, the post miles were increased to 12.1. This area had been previously environmentally evaluated prior to the acquisition of the Tabata mitigation site under the SR-76 Melrose to South Mission Final EIR/EIS and does not add any new additional impacts. Along SR-76, at the easterly end of the project limits, the post miles were previously 17.6; however, due to corrections for the taper length, based on speed and volume, the post miles increased to 17.7. This work is on pavement only and does not add any new additional impacts, it was evaluated within the study limits. Along I-15, at the northern end of the project limits, the post miles were previously 47.1; however, due to corrections for the length of the auxiliary lane taper, based on speed and volume, the post miles increased to 47.3. This work is on pavement only and does not add any new additional impacts; it was evaluated within the study limits.
- Since release of the Draft EIR/EIS, the regulatory framework for some issue areas has changed and some policy updates and/or changes have occurred.

These changes are reflected in the Regulatory Setting and Affected Environment discussions within appropriate sections, and have been updated in the text of the environmental consequences, as appropriate.

Comment letters and the responses from Caltrans are included in Appendix M. Comments submitted on the Draft EIR/EIS included many form letters containing the same subject issues. The most common themes were the following: access points; bike paths, pedestrians, and multi-use trails; comparison of the two alternatives; construction staging and scheduling; County of San Diego proposed San Luis Rey River Park; emergency vehicle travel times; evacuation plans/responses; frontage roads; geometrics/grading (including slope cuts, alignment, curve radii, tangents, and sight distance); intersection configurations; number of signalized intersections; out-of-direction travel distances; traffic data/volumes; Vessels Stallion Farm; and a potential future expansion to six lanes.

Table S-1. Summary of Impacts for Alternatives

Alternative/Impacts	Existing Alignment Alternative (Preferred Alternative)	Southern Alignment Alternative	No Build Alternative
LAND USE	No substantial impacts	Introduction of a new transportation corridor would conflict with planned land uses	No Impact
GROWTH	No substantial impacts	Introduction of a new transportation corridor would influence future growth	No Impact
SOCIOECONOMICS			
Homes/Businesses Displaced	No displacements	One business displacement	No Impact
Community Character and Cohesion	No substantial impacts	Introducing a new transportation corridor and displacement of Vessels Stallion Farm would substantially affect community character and cohesion	No Impact
VISUAL/AESTHETICS			
Character and Scale	Compromises existing visual character	Compromises existing visual character	No Impact
Quality	Substantially reduces visual quality	Substantially reduces visual quality	No Impact
Viewshed	Moderate to moderately high impact to the existing viewshed	Moderately high to high impact to the existing viewshed	No Impact
BIOLOGY			
Sensitive Vegetation Impacts (permanent/ temporary acreages)	68.8/34.8	63.6/56.83	No Impact
San Diego Ambrosia (permanent/temporary acreages)	<0.01/0	0/0	No Impact
San Diego Ambrosia Critical Habitat (permanent and temporary impact acreages)	1.5/0.6	0/0	No Impact
Arroyo Toad number of individuals (permanent/ temporary) impacts	4/2	0/0	No Impact
Arroyo Toad Critical Habitat (permanent and temporary impact acreages)	78.0/64.3	90.4/64.1	No Impact
Southwestern Willow Flycatcher (permanent/ temporary impacts to number of pairs or breeding males observed)	0/0	0/0	No Impact
Southwestern Willow Flycatcher Critical Habitat (permanent/temporary impact acreages)	37.1/10.9	16.4/6.0	No Impact

Alternative/Impacts	Existing Alignment Alternative (Preferred Alternative)	Southern Alignment Alternative	No Build Alternative
Least Bell's Vireo (permanent/temporary impacts to number of pairs or breeding males observed)	6/0	2/0	No Impact
Least Bell's Vireo Critical Habitat (permanent/ temporary impact acreages)	63.2/32.6	33.9/40.9	No Impact
Coastal California Gnatcatcher (permanent/ temporary impacts to number of pairs or breeding males observed)	2/0	0/0	No Impact
Coastal California Gnatcatcher Critical Habitat (permanent/temporary impact acreages)	41.8/30.2	52.9/36.2	No Impact
CULTURAL RESOURCES	Avoidance of known sites; with establishment of two ESAs	Avoidance of known sites	No Impact
PALEONTOLOGY	Moderate impacts may be expected to the Pleistocene older alluvial deposits. Paleontological resources are not expected in any of the other geologic units present in the project area.	Moderate impacts may be expected to the Pleistocene older alluvial deposits. Paleontological resources are not expected in any of the other geologic units present in the project area.	No Impact
FLOODPLAIN ENCROACHMENT	55.9 acres	79.2 acres	No Impact
WATER QUALITY	Treating 66% of impervious surface runoff	Treating 80% of new impervious surface runoff while the current SR-76 roadway 26.7 acres would remain untreated	No treatment of impervious surface runoff
WETLANDS AND OTHER WATERS (Federal and State Jurisdiction) (permanent/temporary impact acreages)	32.52/10.21	14.73/4.17	No Impact
AIR QUALITY	No exceedances	No exceedances	No exceedances
NOISE (without abatement)			
Receptor Locations			
R-18 4554 Estate Drive	57 dBA	N/A	63 dBA
R-42 4141 SR-76 Bldg A	68 dBA	68 dBA	59 dBA
R-51 Nessy Burgers	76 dBA	77 dBA	75 dBA
R-52 Exxon Mobil Station	73 dBA	74 dBA	71 dBA
R-53 3347 Via Altamira	67 dBA	68 dBA	67 dBA
R-61 5820 Lilac Road (Vessels Stallion Farm)	61 dBA	61 dBA	48 dBA
R64 – 31956 Del Cielo Este (nearest façade)	61 (41) dBA	61 dBA	47 (27) dBA
FARMLANDS (land actively farmed/agricultural soils)	Total = 118.3 acres Prime and Unique = 31.0 Statewide/Local Imp. = 40.2	Total = 108.7 acres Prime and Unique = 63.1 Statewide/Local Imp. = 19.7	No Impact

Alternative/Impacts	Existing Alignment Alternative (Preferred Alternative)	Southern Alignment Alternative	No Build Alternative
CUMULATIVE IMPACTS *Impacts cumulatively considerable prior to mitigation	Cumulatively considerable contribution to effects on Visual/Aesthetics*, Cultural Resources*, Hydrology and Floodplains*, Paleontology*, Hazardous Waste/Materials*, Natural Communities*, Wetlands and Other Waters*, Animal Species*, and Threatened and Endangered Species*	Cumulatively considerable contribution to effects on Land Use, Growth, Community Character and Cohesion, Relocations and Real Property Acquisitions, Visual/Aesthetics*, Hydrology and Floodplains*, Paleontology*, Hazardous Waste/Materials*, Natural Communities*, Wetlands and Other Waters*, Animal Species*, and Threatened and Endangered Species*	No Impact
RIGHT-OF-WAY REQUIRED	49.2 acres	98.2 acres	None
CONSTRUCTION COST (in millions)	$201–$206 million (dependent on interchange design variation) DV-1 = $201; DV-2 = $203	$319–$322 million (dependent on interchange design variation) DV-1 = $322; DV-2 = $319	No Cost

USACE = U.S. Army Corps of Engineers; CDFG=California Department of Fish and Game
*Impacts cumulatively considerable prior to mitigation.

Permits and Approvals Needed

Permits listed in Table S-2 would be required for project construction. Caltrans would continue to work closely with all of the resource agencies to maintain communication and coordination throughout the project development process and receipt of the various permits (see Chapter 5).

Table S-2. Permits and Approvals Needed

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species	Biological Opinion received September 22, 2011
U.S. Army Corps of Engineers	Section 404 Permit for dredged and fill waters of the United States	Pending
California Department of Fish and Game	1602 Streambed Alteration Agreement	Pending
California Water Resources Control Board – Region 9	Section 401 Water Quality Certification	Pending
County of San Diego	New Freeway Agreement to facilitate new intersections and the reconfiguration of existing intersections	Pending
California Transportation Commission	Route Adoption (Southern Alignment Alternative Only)	Pending
Federal Highway Administration (FHWA)	Modified Access Agreement	Received FHWA Finding of Acceptability Letter May 25, 2011

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CHAPTER 1
PROPOSED PROJECT

1.1 INTRODUCTION

The California Department of Transportation (Caltrans), in coordination with the Federal Highway Administration (FHWA), proposes to widen and realign State Route 76 (SR-76) between South Mission Road to just east of Interstate 15 (I-15) and to improve the SR-76/I-15 interchange within the communities of Bonsall and Fallbrook in an unincorporated portion of northern San Diego County. The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project are being, or have been, carried out by Caltrans under its assumption of responsibility pursuant to Title 23 U.S. Code (USC) 327. The project proposes a four-lane conventional highway. The total length of the project is approximately 5.6 miles. Within the project limits, SR-76 is currently a two-lane highway that is over capacity and subject to traffic congestion and travel delays. The project proposes expansion of the current Park and Ride facility north of SR-76 with access from Old Highway 395 within the Caltrans right-of-way. Additionally, the project proposes to widen the bridge structure of the SR-76/I-15 interchange to six lanes and modify the existing on- and off-ramps and add loop on-ramps, which would modify the interchange to a partial cloverleaf configuration. An area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way. Figures 1.1-1 and 1.1-2 show the project location and vicinity maps, respectively. Figure 1.1-3 shows the project build alignment alternatives.

The San Diego regional Metropolitan Planning Organization (MPO) responsible for the preparation of Regional Transportation Plans (RTPs) and Regional Transportation Improvement Programs (RTIPs) and the associated air quality analyses is the San Diego Association of Governments (SANDAG). The applicable transportation plans for the proposed project are the 2030 RTP: Pathways for the Future, adopted November 30, 2007, and the 2010 RTIP, adopted September 24, 2010. The project is also included in the 2050 RTP, which was recently adopted by the SANDAG Board of Directors on October 28, 2011. FHWA made an air quality finding of conformity (conformity determination) for the 2030 RTP on December 10, 2007, and a finding of conformity for the 2010 RTIP on December 14, 2010. The proposed project is identified in the 2010 RTIP as MPO ID CAL29B and in the recently adopted 2050 RTP (Page 6-30 under Revenue Constrained Plan).

The proposed project was identified as a needed improvement in RTP documents as far back as 1994 and was a cornerstone of the local sales tax measure for transportation improvements (TransNet) passed by voters in 1988. In November 2004, an extension of this local sales tax measure (TransNet II) was passed by voters. In this extension, the proposed project is identified as an “Early Action Tier 1 Project.” A feature of TransNet II is the designation that projects within the SR-76 corridor result in a “net benefit” to project-related mitigation requirements.

1.1.1 Project Setting

The project study area includes unincorporated areas of northern San Diego County and is defined by the San Luis Rey River Valley, including the lower slopes of the river valley both to the north and south, between South Mission Road to just east of I-15. The northern portion of the study area is within the unincorporated community of Fallbrook, and the southern and far western portions of the project study area are within the unincorporated community of Bonsall.

The project study area includes the existing SR-76 roadway, which runs along the northern edge of the floodplain of the San Luis Rey River between South Mission Road to just east of I-15.

The project area consists of open space, agricultural fields (including ornamental fields), avocado and citrus groves, horse breeding and training facilities, horse pastures, scattered commercial developments, and residential properties. The San Luis Rey River, which runs parallel and to the south of the existing SR-76 alignment, supports several areas of riparian habitat that are considered important for the preservation of sensitive vegetation and wildlife. Development within the study area is limited to a large extent by the large floodplain area of the San Luis Rey River Valley, and upland areas to the north and south, which are mostly built-out with large-lot homes.

As stated previously, much of the land within the project study area is located within the San Luis Rey River floodplain and consists of floodplain, wetlands, and riparian vegetation that provides habitat for several federal and state protected species and other wildlife. The areas of land that are not vacant within the floodplain are primarily dedicated to agricultural or equestrian uses.

Developed areas within the project study area include businesses located primarily along the existing SR-76 and residential areas on the hillsides to the north and south of the San Luis Rey River Valley. Many of the areas within these hillsides include avocado or citrus groves.

1.1.2 Project Background and Status

SR-76 was added to the State Highway System in 1933 and is on the National Highway System. In 1959, the portion of the route from Interstate 5 (I-5) to I-15 was added to the Freeway and Expressway System. The freeway routing for this portion was adopted in 1963. The entire length of SR-76 is on the California State Scenic Highway System and is eligible to be designated as an official State Scenic Highway. Freeway agreements with the City of Oceanside and the County of San Diego were executed in 1964 and 1965, respectively.

In November 1987, San Diego County voters approved TransNet, which added a half-cent sales tax for a period of 20 years to fund a specific set of improvements to the transportation system in San Diego County. The program specifically included funding for the upgrade of SR-76 from I-5 to I-15. SR-76 has already undergone widening and realignment in the City of Oceanside. Phase I of the SR-76 upgrade was from I-5 to Foussat Road in Oceanside and was completed in 1996. Phase II was for the 6 miles from Foussat Road to Melrose Drive and was completed in 1999. A February 1989 Initial Project Report (IPR) evaluated the construction of a conventional highway and an expressway on and along the existing highway alignment from Melrose Drive to I-15. As a result of U.S. Fish and Wildlife Service (USFWS) expressing an interest in assessing the environmental impacts of the Melrose Drive to I-15 project, the design of the conventional highway was further developed in 1992 and 1993. The updated design was again refined in 1994. A Supplemental Project Study Report was produced in 1998 to update project cost, schedule, and scope. In 1999, SANDAG updated the revenue constrained plan of the RTIP that identified funding shortfalls throughout the region. At that time, SANDAG revised the project limits along the SR-76 corridor to extend only from Melrose Drive to South Mission Road. The revision in project limits reflected data from the project's traffic study, which identified origins and destinations of trips within the corridor. The study revealed that more than 40 percent of the traffic was entering/exiting SR-76 at South Mission Road, and that the majority of the trips on SR-76 within those limits were local. Environmental studies commenced in 2001 to analyze

potential impacts within the project limits between Melrose Drive and South Mission Road. With the original TransNet half-cent sales tax measure set to expire in 2008, SANDAG pursued an extension that was passed by voters in 2004. This extension of TransNet included a commitment for full funding of the SR-76 corridor from Melrose Drive to just east of I-15. That commitment further identified both projects in the corridor as Tier 1 Early Action Projects (EAPs) and included the "net benefit" mitigation standard.

Honoring the commitment to the voters, Caltrans initiated preliminary studies on the segment from Melrose Drive to South Mission Road in late 2005. At that time, meetings were held between Caltrans and the federal resource agencies to discuss the possibility of separating the projects into two environmental documents. Based on traffic demand, Caltrans demonstrated, and the agencies concurred, that improvements to both segments could proceed independently as two separate projects. Both have logical termini and independent utility, as they each serve different traffic needs. Improvements on the Melrose Drive to South Mission Road segment would primarily meet the needs of local travelers, while the South Mission Road to just east of the I-15 segment would primarily meet the needs of interregional travelers. Caltrans further committed to the concept that any alternatives carried forward for study for the Melrose Drive to South Mission Road project would not preclude a full range of alternatives for the proposed South Mission Road to just east of I-15 project. The Project Report, which is anticipated to be approved in fall 2011, reflects the preliminary project design components described in this document.

Environmental Protection

Caltrans' environmental policies recognize the need to protect and enhance the quality of life in accordance with environmental, economical, and social goals of the state. Caltrans is mindful of the sensitivity of the San Luis Rey River Valley resources and the ongoing preservation efforts of state and county agencies and various conservancy groups. Caltrans would seek to not impede these efforts and would identify opportunities to offset potential project impacts where feasible and practicable. Protection of these resources would include the purchase of parcels that could be revegetated and reincorporated into the natural riverine habitat. Enhancements to the sensitive habitat would be incorporated where feasible and practicable when considering cost, logistics, and technology.

Because this project would result in 5 or more acres of permanent impacts to waters of the U.S. and requires an Environmental Impact Statement (EIS), pursuant to the National Environmental Policy Act (NEPA), the Clean Water Act (CWA) Section 404 Integration Process for Federal Aid Surface Transportation Project Memorandum of Understanding (MOU) (NEPA/404 MOU) applies. In May 2008, Caltrans began coordination with the federal and state resource agencies, including the U.S. Army Corps of Engineers (USACE), USFWS, U.S. Environmental Protection Agency (USEPA), National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), FHWA, California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB) to implement the NEPA/404 MOU integration process for the proposed SR-76 South Mission Road to just east of I-15 project. NEPA/404 meetings were held approximately every 2 months. The proposed project's Purpose and Need, Selection Criteria, and Range of Alternatives were developed and refined during these meetings to minimize impacts to biological resources within the project study area. The selection of the Existing Alignment Alternative as the Preferred Alternative was submitted to the resource agencies for concurrence on February 28, 2011; concurrence letters were received in March and April of 2011 and are included in Chapter 5, Comments and Coordination. Caltrans would continue to work closely with all of the resource agencies to maintain

communication and coordination throughout the development of the proposed SR-76 South Mission Road to I-15 project.

Net Benefit

Pursuant to the SANDAG 2004 TransNet Sales Tax Extension Ordinance, the SR-76 project should implement the "net benefit" mitigation standard. SR-76 was one of three highway expansions where the TransNet Ordinance indicates that "*direct and indirect impacts to sensitive plant and animal populations, and to the function of the wildlife corridors, should be mitigated in order to produce an on-site 'net benefit' to species and to the movement of wildlife …*" Furthermore, the Ordinance states that the net benefit "*will require a comprehensive baseline analysis of existing and future conditions, adoption of measures to mitigate direct and indirect impacts to species, adoption of measures to accommodate species-specific wildlife movement through the corridors, and implementation of capital project designs that can reduce impacts.*"

Caltrans established an advisory committee to recommend what it believed would constitute a net benefit for SR-76. The group agreed that the overall goal for the San Luis Rey watershed is to maintain and restore a self-sustaining natural ecosystem. Many biotic and abiotic objectives were discussed to implement this goal, including (1) land acquisition for biological mitigation and increased long-term connectivity, (2) floodplain/riparian habitat restoration, (3) enhanced/new wildlife crossings, (4) water quality improvement activities, and (5) species-specific enhancement. The "net benefit" mitigation would be above and beyond that required by the California Environmental Quality Act (CEQA), NEPA, or other resource agency permit requirements. Caltrans is in the process of purchasing property to conserve regional connectivity between sensitive habitats and to help preserve the rural setting. Directional wildlife fencing and wildlife crossings are also part of the net benefit.

County of San Diego – San Luis Rey River Park

Throughout the project study area (and beyond), the County of San Diego is in the process of developing a master plan for a regional park along the San Luis Rey River. The proposed regional park would stretch approximately 9 miles, parallel to SR-76, along the San Luis Rey River from Oceanside to the area surrounding I-15. As envisioned, the park would provide recreational opportunities while preserving the San Luis Rey River and the surrounding lands. In March 2008, the County of San Diego completed the Draft Master Plan document and the draft Programmatic Environmental Impact Report (PEIR) for the proposed regional park. The County Park PEIR discusses areas that have been set aside within the proposed park sites for the proposed SR-76 roadway alignments. The proposed SR-76 South Mission Road to just east of I-15 project and the San Luis Rey River Park Master Plan project are being developed concurrently, thus providing an opportunity to coordinate mitigation and enhancement of the river valley between the two agencies. Caltrans, the County of San Diego, and other resource agencies are working to identify lands for environmental mitigation and to provide a compatible connection between park uses and access to the proposed highway.

1.2 PROJECT PURPOSE

The proposed SR-76 project purpose is to maintain or improve the existing and future traffic operations in the SR-76 corridor between South Mission Road and I-15, and to improve the safe

and efficient local and regional movement of people and goods, while minimizing environmental and community impacts for the planning design year of 2030.

The objectives of this project are to:

- Maintain or improve future traffic levels of service in 2030 over the existing levels of service;
- Maintain or improve travel times within the corridor;
- Improve safety conditions for motorists and the general public along the corridor;
- Provide a facility that is compatible with future transit and other modal options;
- Provide consistency with the 2030 and recently adopted 2050 RTP, the current transportation plan for the San Diego region, where feasible and in compliance with federal and state regulations;
- Maintain the facility as an effective link in the intraregional and interregional movement of people and goods. This includes facilitating the east-to-west movement of vehicles traveling south from Riverside County to areas along the SR-76 corridor such as Fallbrook or Bonsall, or coastal communities such as Oceanside;
- Protect and/or enhance the human and natural environment along the SR-76 corridor;
- Implement aspects of "net benefit" as required by TransNet and agreed upon by the resource agencies during the development of the project;
- Protect and maintain community character and cohesion and the rural landscape within the corridor; and
- Accommodate existing and proposed equestrian and hiking trail connections where feasible and in compliance with federal and state regulations.

1.3 PROJECT NEED

The proposed SR-76 South Mission Road to Interstate 15 Highway Improvement Project is needed for the following reasons:

- **Mobility and Congestion** – The proposed project is needed to help relieve local and regional congestion that has resulted from current and future (projected) population growth, increased residential development, and increased commercial development primarily within areas surrounding the corridor.
- **Current Design Standards** – Currently, SR-76 from South Mission Road to just east of I-15 does not meet current design standards established by the Highway Design Manual (HDM) (dated September 2006) for shoulder widths, stopping distance, and sight distance. The proposed widening and realignment of SR-76 would relieve congestion by widening and upgrading the highway to current Caltrans design standards.

1.3.1 Capacity

SR-76 is a heavily used east/west two-lane conventional highway serving intraregional, interregional, commuter, and recreational traffic from I-5 through I-15, terminating at State Route

79 (SR-79). Continued growth in northern San Diego County, including casino development and expansion along SR-76 east of I-15; extensive proposed development in the northeast quadrant of the I-15 interchange (including residences, commercial development, and a satellite Palomar Community College campus); and substantial growth in southwestern Riverside County have resulted in a higher than average annual increase in traffic on SR-76.

Based on regional projections contained in the 2030 RTP and recently adopted 2050 RTP, increases in growth and traffic are expected to continue into the foreseeable future. SANDAG, the City of Oceanside, the County of San Diego, and the unincorporated communities of Bonsall and Fallbrook have all expressed an urgent desire to reduce traffic congestion, promote greater regional mobility, and improve user safety, while minimizing the effects of the proposed project on the environment and local communities.

During peak periods, SR-76 from South Mission Road to I-15 is typically congested. SR-76 is classified in the County of San Diego Circulation Element as the following:

- Expressway from East Vista Way to South Mission Road
- Prime Arterial from South Mission Road to I-15
- Major Road east of I-15

Currently, SR-76 is a two-lane roadway in the study area with one lane of travel in each direction. It is a four-lane roadway between Old Highway 395 and I-15. Additionally, there are four lanes at key intersections along SR-76 to provide additional capacity at intersections. The posted speed limit in the study area is 55 miles per hour (mph).

Substantial increases in population are anticipated in the next 20 to 25 years for the cities and unincorporated northern part of San Diego County, and the cities and unincorporated portion of southwestern Riverside County. Between 2000 and 2030, SANDAG has forecasted that population in the community of Fallbrook will grow by 30,234 people, or by 76 percent. The community of Pala/Pauma is expected to increase by 7,761 people, or by 126 percent, while the community of Valley Center is expected to increase by 25,179 people, or 162 percent. For the southwestern Riverside County area, the Western Riverside Council of Governments published population projections showing that the aggregate population growth within the southwestern Riverside cities of Lake Elsinore, Murrieta, Perris, Temecula, Hemet, and San Jacinto between 2005 and 2030 would be 273,164 additional people, an increase of 74.5 percent. This figure does not include population increases for the unincorporated areas of southwestern Riverside County.

Commercial truck traffic in this portion of SR-76 averages 12.5 percent of the average daily traffic (ADT) volume, equating to approximately 3,250 truck trips daily. The mix of the commercial truck traffic by axle is 51.5 percent two-axle, 7.8 percent three-axle, 1.3 percent four-axle, and 39.4 percent five-axle trucks. For year 2030 traffic forecasting purposes, truck trips are expected to remain at 12 to 15 percent of the total ADT.

In an early investigation of this segment of SR-76, preliminary studies of traffic conditions were performed. Traffic volumes from traffic counts and forecasted 2030 volumes were compared to the road capacity in its current configuration. Caltrans began environmental technical studies for the proposed project in 2007, basing those studies on the most current traffic projections then available, which were SANDAG's Series 10 projected traffic volumes for year 2030 (46,000 at SR-76/South Mission; 46,300 at SR-76/I-15). During the course of the project development process, SANDAG released both the Series 11 forecasts and model (with year 2030 forecasts,

included 48,900 at SR-76/South Mission; 41,833 at SR-76/I-15) and, more recently, the Series 12 forecasts and model, including year 2035 forecasts (43,400 at SR-76/South Mission; 43,000 at SR-76/I-15) and year 2050 forecasts (50,100 at SR-76/South Mission; 51,100 at SR-76/I-15), neither of which identified an appreciable change in predicted traffic volumes. Upon review of these different data sets, the project team determined that the initial 2030 traffic volumes, which were used for the basis of traffic studies, were indicative of year 2035 volumes and determined that a revision at this time would not alter the results of the associated studies. The results indicated the need for improvement to attain an acceptable level of service (LOS) of D or better. Table 1-1 describes flow conditions at different LOS.

The current traffic study was based on existing data, and indicated that all segments of SR-76 between South Mission Road and Pankey Road were operating at LOS E or F and would worsen by 2030. More detailed traffic analysis indicated that the intersections drove traffic flow; therefore, intersections, segments between intersections, direction of travel, and adjacent street traffic were analyzed. Section 3.10 of this EIR/EIS presents a more detailed analysis.

An analysis was performed using the SANDAG regional transportation model to determine the origin and destination of trips on the portions of SR-76 immediately east and west of South Mission Road. Table 1-2 shows the number of trips and percentage of total trips related to origins and destinations in the year 2030.

SR-76 is the most direct transportation corridor between the rapidly growing communities of southwestern Riverside County and the areas of north coastal San Diego County. Because of this and due to the development along the corridor, SR-76 has become a heavily used commuter corridor. As a result, it operates at LOS F between South Mission Road and I-15. As congestion increases, the accident rates are also expected to increase.

The 2030 ADT volumes in Table 1-2 show that a majority of the trips (52,875 or 81 percent) along this portion of SR-76 are from within San Diego County. However, a portion of these trips (16 percent) are from Temecula. Approximately 3 percent of the trips are from Orange County. The importance of the trips to and from southwestern Riverside County is further highlighted by rapid population growth that is forecast for the communities within that area. It is anticipated that rapid population growth and continued urbanization within southwestern Riverside County would increase travel demand along SR-76 within the proposed project limits. Additionally, planned development east of the proposed project limits (i.e., housing development, casino expansion, satellite college campus development; see Section 1.3.3) are also anticipated to add travel demand to SR-76 within the proposed project limits.

Currently, SR-76 between South Mission Road and I-15 does not meet minimum design standards established by the 2006 Highway Design Manual (HDM) for shoulder widths, stopping distance, and sight distance. The proposed widening and realignment of SR-76 would relieve congestion and improve traveler operational characteristics by widening and upgrading the highway to current Caltrans design standards.

Table 1-1. Level of Service

LEVELS OF SERVICE
for Multi-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. **No delays**
B		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. **No delays**
C		60	Density becomes noticeable with ability to maneuver limited by other vehicles. **Minimal delays**
D		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. **Minimal delays**
E		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. **Minimal delays**
F		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. **Significant delays**

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways

Table 1-2. Select Link Analysis: 2030 ADT Traffic Volumes on SR-76 East and West of South Mission Road

2030 West of Mission *Origin/Destination*	2030 Average Daily Traffic Volume on SR-76 West of S. Mission Road	Percent of Total Trips
Temecula	10,310	15.8%
Oceanside/Vista/Carlsbad	18,249	28.0%
Mission/I-15/SR-76 (Fallbrook/Bonsall)	22,288	34.2%
Marine Corps Base Camp Pendleton	3,934	6.0%
Pala/Pauma Casino area	3,580	5.5%
Orange County	2,046	3.1%
San Marcos/Escondido	1,340	2.1%
s/o Fallbrook–w/o I-15	1,773	2.7%
SR-76 East of I-15	346	0.5%
Rest of County	1,366	2.1%
Total Adjusted Volume	65,232	100.0%

2030 East of Mission *Origin/Destination*	2030 Average Daily Traffic Volume on SR-76 East of S. Mission Road	Percent of Total Trips
Temecula	10,869	23.6%
Oceanside/Vista/Carlsbad	13,612	29.6%
Mission/I-15/SR-76 (Fallbrook/Bonsall)	10,776	23.4%
Marine Corps Base Camp Pendleton	3,043	6.6%
Pala/Pauma Casino area	3,725	8.1%
Orange County	1,425	3.1%
San Marcos/Escondido	489	1.1%
s/o Fallbrook–w/o I-15	888	1.9%
SR-76 East of I-15	123	0.3%
Rest of County	1,040	2.3%
Total Adjusted Volume	45,990	100.0%

1.3.2 System Linkage

Currently, SR-76 serves a variety of user groups and a diverse range of both local and regional needs. The corridor serves commuter traffic from rural areas, together with the growing urban communities of southern Riverside County. SR-76 serves as the prime arterial for the local rural community while also serving travelers between Fallbrook, Bonsall, Marine Corps Base Camp Pendleton, Vista, and Oceanside. The highway also serves the tourist trade and travelers to multiple casinos and recreation areas to the east of I-15 as well as coastal areas along I-5.

Other major east/west transportation facilities include State Route 78, located approximately 5 to 12 miles south of SR-76, which is the principal freeway in northern San Diego County providing access to the extensive commercial development between I-5 and I-15; State Route 56, located approximately 18 miles south of SR-76, which is another link between I-5 and I-15; and State Route 74, which is located approximately 12 to 20 miles north and connects Orange and Riverside counties between I-5 and I-15.

The proposed project would form a connecting link for travel between I-15 and arterial roadways serving Bonsall and Fallbrook. Within a more regional context, SR-76 is currently the most efficient transportation corridor between the rapidly growing communities of southwestern Riverside County and the areas of north coastal San Diego County (along the I-5 corridor). However, with current and projected traffic volumes creating less-than-desirable traffic congestion along the corridor, the ability of the existing SR-76 roadway within the proposed project limits to effectively form this link would diminish over time. Also, the proposed project would help link coastal communities within northern San Diego County and proposed development to the east of the proposed SR-76 South Mission Road to I-15 project. Such development includes the proposed Palomar Community College extension campus; housing and business developments; and the Pala, Pauma, and Rincon Indian casinos, which are currently planned for expansion.

1.3.3 Social Demands and Economic Development

The need for the proposed project relates to regional growth trends within the areas that would be served by the proposed project, primarily southwestern Riverside County and northern San Diego County. Population projections for surrounding communities of northern San Diego County and within southwestern Riverside County help support the need for the proposed project, as does proposed development within the area, especially to the east of the proposed project along SR-76.

Regional population projections through the year 2030 anticipate the subregional area (Fallbrook, Vista, Oceanside, San Marcos, Bonsall, Marine Corps Base Camp Pendleton, Valley Center, and Pauma Valley) will see a population increase of almost 165,000 people between 2004 and 2030, which equates to a 36.3 percent increase. Also, population projections for nearby communities in southwestern Riverside County (including Lake Elsinore, Murrieta, Perris, Temecula, Hemet, and San Jacinto) show a projected growth of slightly greater than 273,000 between 2005 and 2030, or a 74.5 percent growth rate. The results of this review and analysis show that, based on the projected growth, the projected increases in traffic volumes (Table 1-2), and the regional 2030 transportation needs, an expanded facility is required.

Several development projects are currently proposed to the east of the project study area. Reasonably foreseeable projects include the following:

- Other Caltrans projects involve improving the SR-76/Pauma Reservation Road intersection. Several curve realignments along SR-76 and improvements to the intersections of SR-76/Cole Grade Road and SR-76/Valley Center Road are conceptual, with no plans developed and no studies underway. The Pala Creek Bridge replacement project proposes to replace the existing Pala Creek Bridge, which has been identified as scour critical. The Pala Creek Bridge project would require a Section 7 consultation with USFWS, a 404 Permit from USACE, a 1602 Streambed Alteration Agreement from CDFG, and a 401 Water Quality Certification from the RWQCB. This project is programmed in the 2008 State Highway Operation and Protection Program (SHOPP).
- The Palomar Community College – North Education Center project (part of the larger Meadowood, Campus Park, and Campus Park West developments that include approximately 1,200 homes and a business park) proposes a college satellite campus that would be located north of SR-76 along Pankey Road. This project proposes a signalized intersection with an auxiliary lane from Horse Ranch Creek Road and dual left-in and right-out lanes. The project would take advantage of road widening

constructed by the Palomar Aggregates Quarry Project and, if channelization lanes are required, could further widen to six lanes that portion of SR-76 west to the I-15 interchange. Meadowood and Campus Park EIRs have been prepared but not released for public review. Campus Park West technical studies are underway. These projects have contributed "fair share" through the County of San Diego toward improvements at the SR-76/I-15 interchange. "Fair share" contributions would be made when the permits are issued.

- The Pala Band of Mission Indians expanded the Pala Casino located along SR-76, approximately 6 miles east of the I-15 interchange. This project included improvements along the frontage of SR-76. The Pala Band of Mission Indians entered into an agreement with the County of San Diego to contribute "fair share" for improvements to SR-76. The Final EIR for this project was certified on March 28, 2007.
- The Pauma Band of Mission Indians plans to expand its Casino Pauma located along SR-76, approximately 12 miles east of the I-15 interchange. This project also proposes improvements to the SR-76/Pauma Reservation Road intersection. The Pauma Band of Mission Indians have contributed "fair share" through the County of San Diego for improvements to SR-76. "Fair share" contributions would be made when the permits are issued.

1.3.4 Modal Interrelationships

The proposed project would interface with and serve to complement future mass transit, rail, pedestrian, and bicycle modes of travel in several ways. The discussion below details the proposed project features that would be supportive of these other travel modes.

Park and Ride lots are valuable resources that support transit usage and carpooling, which leads to improved performance of the entire transportation system. They provide a location for individuals to park their vehicles, join carpools, and access bus and rail services, thereby taking vehicles off local streets and roads, as well as the State Highway System (SHS). Planning and constructing a network of well-placed Park and Ride lots adds to a productive transportation system. The goals of a network of Park and Ride lots include, but are not limited to, increasing the mobility options of travelers, increasing person throughput on the system, decreasing the number of vehicle trips, decreasing the greenhouse gas and air pollution associated with transportation, and decreasing congestion on transportation facilities (Caltrans 2010). Currently, there is one existing Park and Ride lot within the project limits along Old Highway 395, just northwest of the SR-76/I-15 interchange. The proposed project would include improvements to this lot. In addition, an area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way. Ingress and egress would be via Old Highway 395.

The proposed project would include high-occupancy vehicle (HOV) lanes for all on-ramps at the SR-76/I-15 interchange. These HOV lanes would encourage both carpooling and mass transit (buses). As stated previously, the proposed project would facilitate the east-to-west movement of vehicles traveling south from southwestern Riverside County to areas along the SR-76 corridor such as Fallbrook or Bonsall, coastal communities such as Oceanside, and various entertainment and recreational areas to the east. Additionally, the proposed project would serve as a link from southwestern Riverside County to the rail transit systems available along the coast, i.e., the COASTER, Amtrak, and Metrolink.

The California High Speed Rail Authority and the Federal Rail Administration have proposed the California High-Speed Train project, connecting the San Francisco Bay area to Los Angeles, and later to Sacramento and San Diego. The proposed statewide high-speed rail line system would eventually consist of 800 miles of dedicated state-of-the-art track with rails capable of speeds up to 220 miles per hour. The route would be constructed at grade in an open trench, below grade in a bored tunnel, or above grade on an elevated guide-way, depending on terrain, physical constraints, environmental impacts, and community input along sections of the line. Preliminary plans indicate a rail route alternative that would follow I-15 into San Diego County and may cross SR-76 in the future. Any interchange improvements or accommodation of the rail alternative would be addressed through the High Speed Rail Authority's environmental review and documentation.

The County of San Diego's General Plan states a desire to add sidewalks and bike facilities to promote walking and biking as alternatives to driving. The Americans with Disabilities Act (ADA) regulations require, for new construction, that curb ramps be provided at any intersection having curbs or other barriers to entry from a street-level pedestrian walkway. Sidewalks (5 feet in width) are proposed on both sides of the highway for the area around the SR-76/I-15 interchange to accommodate pedestrian traffic. Bicycle travel on SR-76 is currently allowable for the entire length of the route, and portions of the existing SR-76 contain bicycle lanes. The Nonmotorized Component includes continued utilization of the existing Regional Bikeway System, the Bus Bicycle Rack Program, and the Bicycle Locker Program at Park and Ride lots. A Class III Bike Route is proposed along both sides of the highway along the entire length of the project. The bike route would be a shared facility for motor vehicles (including emergency parking), pedestrians, and bicycles that would all have access to use the proposed 10-foot outside shoulder.

1.3.5 Safety

A study of the traffic accident records on file with the County of San Diego was performed for the roadway segments outside of the state right-of-way. During the period of review, January 2002 through April 2006, 27 accidents were reported, with no fatalities, 25 injuries, and two non-injuries.

The major categories for type of collision on SR-76 were listed as Rear End (37 percent), Broadside (10 percent), Hit Object (20 percent), Sideswipe (12 percent), Overturn (11 percent), and Head-On (8 percent). Eighty-seven percent of the accidents on the I-15 ramps fell within the Rear End classification. Further analysis indicates that 74 percent of accidents on SR-76 occurred under clear weather conditions, 67 percent occurred during daylight hours, and 87 percent occurred under dry roadway surface conditions.

A review of Traffic Accident Surveillance and Analysis System (TASAS) data concluded that the higher overall accident rates within the projects limits of SR-76 compared to the statewide average were due to the high number of access points coupled with inadequate sight distance and narrow shoulder width. Standard shoulder widths, decreased access, barriers, and standard sight distances proposed for both alignment alternatives would improve these existing deficiencies, improving the operational characteristics of the corridor. Intersections have a higher potential for traffic conflict when compared to other highway sections. At an intersection, continuity of traffic is interrupted, traffic patterns cross, and turning movements occur. Limited at-grade signalized intersections and full access intersections are proposed within the project limits to reduce traffic conflicts and increase capacity.

1.3.6 Roadway Deficiencies

Currently, SR-76 serves a variety of user groups and a diverse range of both local and regional needs. The corridor serves commuter traffic from rural areas along with the growing urban communities of Southern Riverside County. It serves as the prime arterial for the local rural community while also serving travelers between Fallbrook, Vista, and Oceanside. SR-76 also serves the tourist trade and travelers to multiple casinos and the coastal communities. Future regional plans are anticipated to place a further burden on the corridor to serve as a key corridor for commercial goods movement and the area's rich agricultural industry.

As noted in Table 1-2, this two-lane conventional highway currently serves a volume of more than 18,000 ADT. This number exceeds the County of San Diego Roadway Classification available capacity of a two-lane roadway of 16,200 ADT. Comparing the existing traffic volumes with the projected "No Build" Year 2030 traffic volumes shows that the traffic using this corridor is projected to nearly double. SR-76 is a two-lane, conventional highway that is over capacity and subject to traffic congestion and travel delays. Between South Mission Road to just east of I-15, SR-76 does not meet minimum design standards established by the 2006 Highway Design Manual for shoulder widths, lane widths, stopping distance, sight distance, or curve radii.

1.3.7 Independent Utility and Logical Termini

FHWA defines logical termini as the rational end points for a transportation improvement (typically major traffic generation, i.e., intersecting roadways), and rational end points for a review of environmental impacts (generally broader than the strict construction termini). Logical termini should encompass an entire project. Cutting a larger project into smaller projects may be considered "improper segmentation" under NEPA. If smaller segments are desired, the project should be evaluated for independent utility. A project is determined to have independent utility if it is able to function on its own, without further construction of an adjoining segment.

South Mission Road was chosen as a logical beginning for the western end of the proposed project due to the traffic demands along SR-76 east and west of South Mission Road. The SR-76 and South Mission Road intersection is the end point for the SR-76 Melrose to South Mission project currently under construction. The proposed project would form a connecting link for local arterial roadways, including Gird Road, for travel between South Mission Road and I-15. Traffic demand along SR-76 east of South Mission Road is lower due to many commuter trips originating and terminating in Fallbrook. Just east of the SR-76/I-15 interchange was chosen as a logical eastern terminus due to decreased traffic demand immediately east of the SR-76/I-15 interchange and to connect to the existing four-lane facility recently constructed by others to the east with the proposed four-lane facility to the west.

The majority of the traffic traveling farther east on SR-76 accesses the highway from either the I-15 southbound or northbound off-ramps. The South Mission Road segment would primarily meet the needs of interregional travelers. The traffic analysis indicates there are nearly 46,000 trips on SR-76 east of South Mission Road, and there are 65,200 trips on SR-76 west of South Mission Road. The project would function as a stand-alone project even if the SR-76 Melrose Drive to South Mission Road Highway Improvement Project were not constructed. The proposed SR-76 South Mission to I-15 project, if built separately without the Melrose to South Mission project construction, would not constrain the consideration of a full range of alternatives for improvements between Melrose and South Mission. The proposed South Mission to I-15 project would have independent utility and is a sufficient length to address environmental matters on a broad scope. This would allow for informed decisions regarding potential impacts

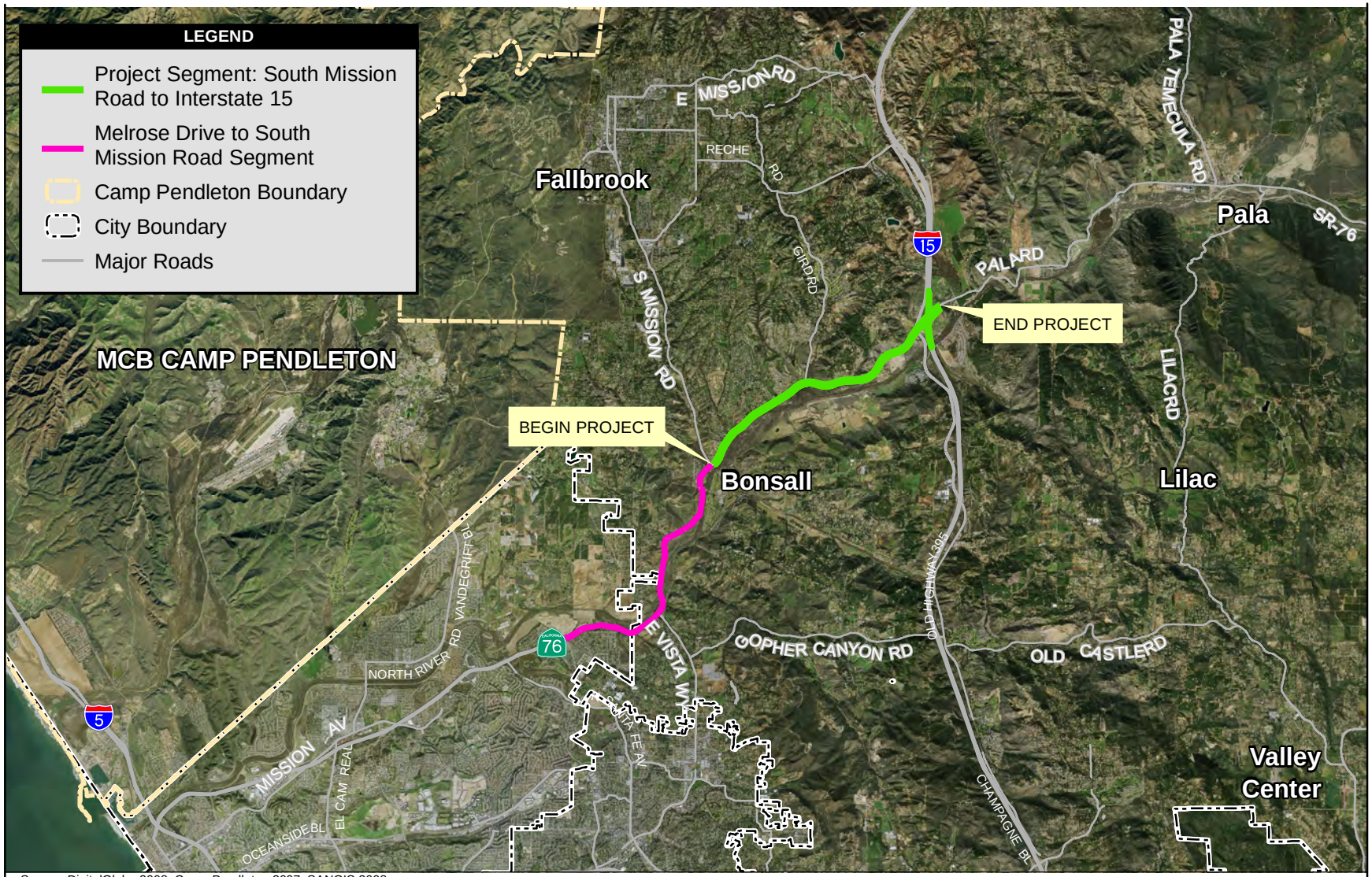
to sensitive resources within the river valley and to the east of the SR-76/South Mission intersection. The additional capacity and enhanced operations would benefit the trips generated locally to the north and east of South Mission Road, even if there were no future improvements to the west of that intersection. Currently, SR-76 improvements have been constructed by others east of the SR-76/I-15 interchange and are under construction between Melrose and South Mission.

State Route 76 Corridor

0 3.75 7.5 15 Miles

1" = 7.5 Miles

Figure 1.1-1
Project Location Map

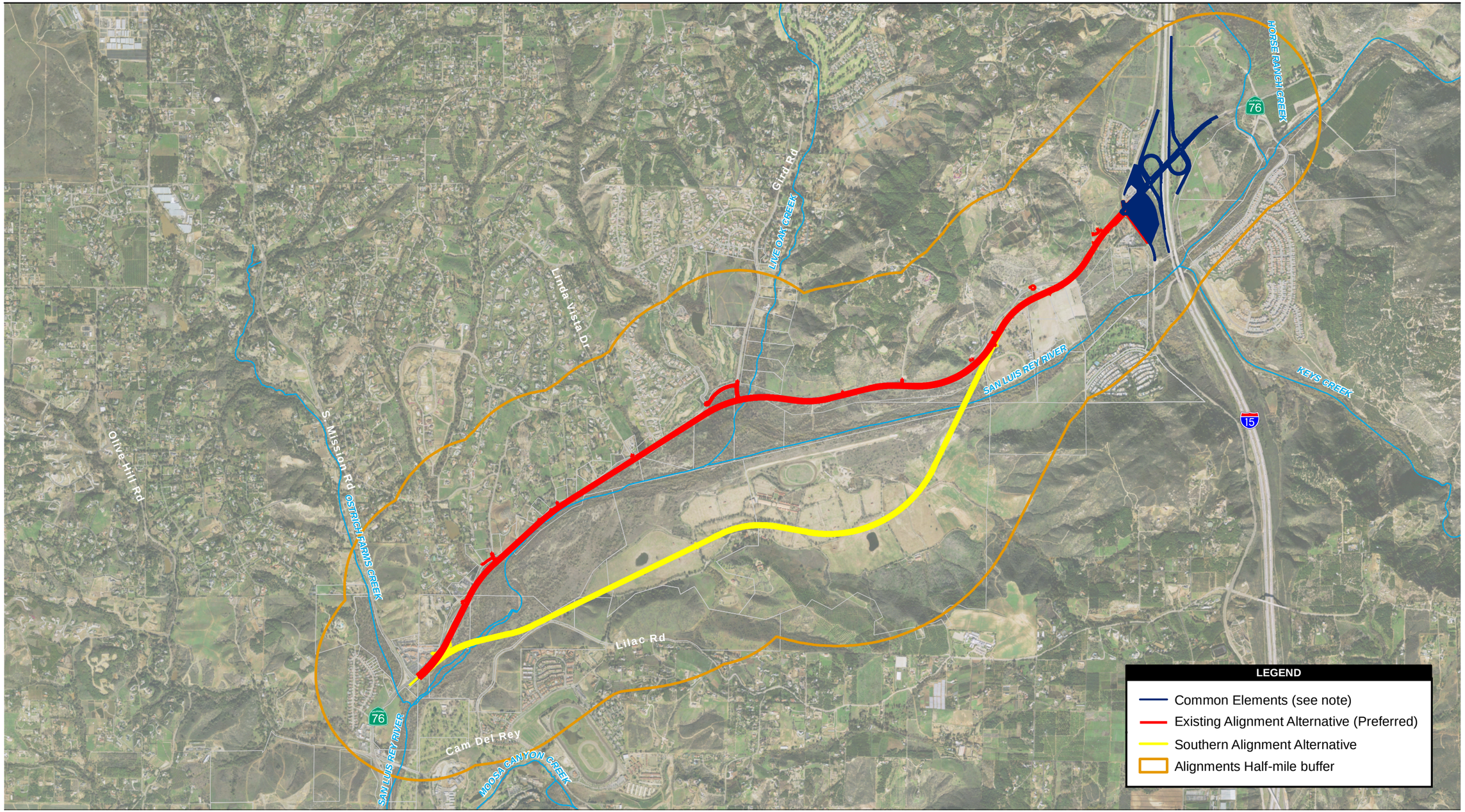


Source: DigitalGlobe 2008; Camp Pendleton 2007; SANGIS 2008

13,500 0 13,500 Feet

Scale: 1 = 162,000; 1 inch = 13,500 feet

Figure 1.1-2
Project Vicinity Map



Source: DigitalGlobe 2008; SANGIS 2009; Dokken Engineering 2010

2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 1.1-3
Build Alignment Alternatives

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CHAPTER 2
PROJECT ALTERNATIVES

This section describes the proposed project and the range of design alternatives. The alternatives were developed by the Project Development Team (PDT) and through the NEPA/404 MOU integration process with federal, state, and local resource agencies in order to achieve the project's purpose and need while avoiding or minimizing environmental impacts. The alignment alternatives under consideration are the Existing Alignment Alternative, the Southern Alignment Alternative, and the No Build Alternative. The Existing Alignment Alternative, with the partial cloverleaf configuration (identified as DV-1 in the Project Report), has been identified as the Preferred Alternative.

The proposed project is located in northern San Diego County on SR-76 from South Mission Road to just east of the I-15 interchange. The proposed project covers a distance of approximately 5.6 miles. Within the proposed project limits, SR-76 is a conventional highway with two lanes, nonstandard shoulders and at-grade intersections and driveway connections (see Figures 2.1-2a through 2.1-5).

The project's purpose is to maintain or improve the existing and future traffic operations in the SR-76 corridor between South Mission Road to just east of I-15 to ensure the safe and efficient local and regional movement of people and goods, while minimizing environmental and community impacts for the planning design year 2030.

2.1 PROJECT ALTERNATIVES

In addition to the No Build Alternative, two build alignment alternatives are analyzed for the proposed project study corridor: the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. Both alternatives originate at the existing SR-76 intersection with South Mission Road. East of this intersection, the two alignment alternatives diverge to opposite sides of the San Luis Rey River as they progress east of South Mission Road. The Southern Alignment Alternative crosses the San Luis Rey River just east of South Mission Road and crosses back over the river near Star Track Way. It then follows an alignment that is identical to that of the Existing Alignment Alternative (Preferred Alternative) from Star Track Way to just east of the I-15 interchange. Both alternatives include design improvements to the SR-76/I-15 interchange, including improvements to the Park and Ride facility immediately northwest of the SR-76/I-15 interchange. An area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way. While the build alternatives are both conventional highways, the designs vary with respect to project features such as intersections, bridges, and right-of-way requirements. A typical cross section of the proposed alignment alternatives is provided in Figures 2.1-1a and 2.1-1b.

2.1.1 Common Design Features of the Build Alternatives

The Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative would construct the SR-76 segment from South Mission Road to just east of I-15 as a four-lane facility. Both alternatives would have two eastbound lanes and two westbound lanes. Each alternative would require channelization lanes in some locations. Signalized and unsignalized intersections would occur at specific locations for local access.

The number of signalized intersections is similar for both alternatives. Common to both alternatives, signals are proposed at South Mission Road and Old Highway 395, and one signal is proposed at each of the northbound and southbound ramps on the SR-76/I-15 interchange. In the Draft EIR/EIS, the Southern Alignment Alternative had one more signalized intersection than the Existing Alignment Alternative (Preferred Alternative). For the Southern Alignment Alternative, two additional signals were proposed at both the westerly and easterly SR-76 connections with the frontage road. For the Existing Alignment Alternative (Preferred Alternative), a signal would be located at Gird Road. Supplemental traffic studies at Via Monserate were completed subsequent to the Draft EIR/EIS release, which determined that a signal is also warranted at the intersection of this street with SR-76. Since a signal warrant can be met at this location, a signalized intersection would be constructed at Via Monserate. In the final proposed project, both alternatives would therefore have the same number of signalized intersections.

There would be two lanes in each direction, and each lane would be 12 feet wide. Each direction of travel would be separated by a varying-width median with a concrete barrier. There would be a minimum 5-foot-wide paved inside shoulder and a 10-foot-wide paved outside shoulder in each direction. The outside shoulders would accommodate bicycles and pedestrians, as well as emergency parking.

Based on traffic forecasts using the SANDAG regional model, a need for six lanes in 2030 is not warranted. To improve operations, the project would grade and construct four through-lanes with channelization (an additional lane in each direction at the intersection) at South Mission, Old Highway 395, and at the southbound and northbound SR-76/I-15 interchange ramps. Turn pockets are being provided for left- and right-turn movements where warranted. In addition, a four-lane facility is consistent with both the current 2030 RTP and the recently adopted 2050 RTP.

Some areas where the proposed project results in excess pavement, such pavement would be abandoned and removed, and most of those areas revegetated. This is particularly the case under the Existing Alignment Alternative (Preferred Alternative) where portions of the current highway would no longer be needed due to curve corrections.

Intersection configurations and local street access were also analyzed and designed to provide optimal sight distances and be consistent with state and federal standards. To enhance roadway operation and safety, acceleration and deceleration lanes and turn pockets would be studied and incorporated, whenever practical, during final design.

Various utility facilities are located within the footprint of each build alternative, including natural gas, telephone, television, telecommunications, water, and both overhead and underground electricity. The proposed project would require utility relocations along both of the proposed alignments. To suppress airborne sediment during construction activities, preventive measures would be used, such as watering to confine dust plumes to the project work areas, the suspension of grading and earth movement when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes, minimizing land disturbance, and limiting vehicular paths on unpaved surfaces and stabilizing any temporary roads during construction. The development of construction access roads and temporary detours for residents and motorists may be necessary depending on the alternative selected.

Improvements to the existing Park and Ride facility located within the Caltrans right-of-way immediately northwest of the SR-76/I-15 interchange, bound by I-15, SR-76, and Old Highway

395 (see Figure 2.1-4), would consist of approximately 3 acres of additional paved parking area adjacent to the lot that would support multiple uses such as carpools, vanpools, and truck parking. Ingress and egress would be via Old Highway 395. An area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, was proposed in the draft EIR/EIS as a new Park and Ride facility; it is evaluated in this document for potential future expansion of the Park and Ride facility within the Caltrans right-of-way.

There are two SR-76 and I-15 interchange design variations. The interchange connects the existing four-lane facility recently constructed by others east of I-15 with this proposed project four-lane facility to the west. The first interchange design variation (DV-1) is a partial cloverleaf configuration, which, along with the Existing Alignment Alternative (Preferred Alternative), has been identified as the preferred alternative. The interchange design proposes to modify the SR-76/I-15 interchange to a partial cloverleaf configuration by adding two loop on-ramps, realigning and widening the existing on- and off-ramps, and widening the bridge structure over I-15 to six lanes, including channelization lanes at the ramp intersections. Two-lane on-ramps are proposed with this interchange design variation. One of the lanes would be designated as an HOV lane. This design variation would also include the addition of a 1,000-foot-long auxiliary lane to northbound I-15, as shown in Figure 2.1-4. This interchange design variation requires a Modified Access Agreement from FHWA. A “Finding of Acceptability” for the proposed modification to the interchange was received from FHWA on May 25, 2011. Final FHWA approval would be obtained after approval of this document.

The second interchange design variation (DV-2) is to modify the existing spread diamond configuration. The interchange connects the existing four-lane facility recently constructed by others east of I-15 with this proposed project four-lane facility to the west. This design variation would widen the existing bridge over I-15 to a four-lane bridge with dual back-to-back left-turn pockets. This design variation would also improve the existing on- and off-ramps to meet current Caltrans design standards. Two-lane on-ramps with one HOV lane is proposed with this interchange design variation. This design variation would also add a 1,000-foot-long auxiliary lane to northbound I-15. This interchange build design variation is shown in Figure 2.1-5.

Each alternative would require a substantial amount of fill material. Design goals are usually planned to balance the project’s cut and fill to negate either a shortage of material or excess material for the proposed project, which could eliminate unnecessary trucking of materials to or from the construction site. The Existing Alignment Alternative (Preferred Alternative) would require approximately 910,000 cubic yards and the Southern Alignment Alternative would require approximately 990,000 cubic yards of fill material. Several options for obtaining this fill material have been considered. It is anticipated that Palomar Aggregate Quarry (about 1.5 miles east of the SR-76/I-15 interchange) could be a source of fill material near the site. The north side of the Existing Alignment Alternative (Preferred Alternative) between Ramona Drive and Calle de la Vuelta has cut slopes for the proposed project that could be further flattened to improve sight distance in nonsensitive areas. The Southern Alignment Alternative has generally less potential to obtain fill material from cut slopes, since the majority of the alignment is in a fill section away from the existing slopes. Additionally, there are some restoration/mitigation sites currently being studied along this portion of SR-76 that could potentially provide substantial amounts of fill material.

Standard Design Exceptions

An investigation was completed to identify all potential design exceptions for this project. Table 2-1a provides a summary of the nonstandard design features requiring mandatory design

exception, and Table 2-1b summarizes the nonstandard design features requiring advisory design exceptions.

Six Mandatory Design Standard Exceptions have been identified, as shown in Table 2-1a.

Table 2-1a. Mandatory Design Exceptions

NONSTANDARD FEATURE	CORRESPONDING HDM STANDARD
1. Superelevation on City Streets and County Roads: The cross slope of Old Highway 395 (a County road) would match the approximately 1.5% longitudinal slope of SR-76 across the intersection, which would cause an adverse superelevation through the intersection. This is an existing condition.	HDM 202.7: Superelevation rates of local streets and roads which are within the State right of way (with or without connection to State facilities) shall conform to AASHTO standards, for the functional classification of the facility."
2. Standards for Curvature: The alignment of Old Highway 395 (a County road) includes a 700-foot radius curve. This is an existing condition.	HDM 203.2: Table 203.2 shall be the minimum radius of curve for specific design speeds.
3. Corner Sight Distance at Public Road Intersections: Nonstandard corner sight distance is proposed at two signalized intersections: Via Monserate and Gird Road.	HDM 405.1(2)(b): Where restrictive conditions exist, similar to those listed in Index 405.1(2)(a), the minimum value for corner sight distance at both signalized and unsignalized intersections shall be equal to the stopping sight distance as given in Table 201.1, measured as previously described.
4. Stopping Sight Distance: Nonstandard stopping sight distance is proposed at three locations. Two locations are due to the proposed location of the median barrier, and the third is due to the inclusion of the median acceleration lane at Star Track Way/Sage Road.	HDM 201.1: Table 201.1 shows the standards for stopping sight distance related to design speed, and these shall be the minimum values used in design.
5. Shoulder Standard Width: Left shoulder widths less than the standard 5 feet are proposed at left turn pockets.	HDM 302.1: The shoulder widths given in Table 302.1 shall be the minimum continuous usable width of paved shoulder.
6. Cable Railing: Cable railing is proposed across the openings of wildlife escape ramps that woulod have a vertical fall of six (6) feet at the top of the retaining wall supporting the earthen ramp.	HDM 210.6: Cable railing should be installed for employee protection in areas where employees may work adjacent to and above vertical faces of retaining walls, wingwalls, abutments, etc., where the vertical fall is four (4) feet or more.

Mandatory Exception 1

Depending on the curvature of the roadway, the Highway Design Manual (HDM) requires that roads have a certain degree of cross slope, also known as superelevation. HDM Index 202.7 requires the cross slope for local roads within the state's right-of-way conform to the American Association of State Highway and Transportation Official's (AASHTO's) standard for functional classification of that facility. This cross slope requirement, as dictated in AASHTO's standards, cannot be met at Old Highway 395 (a County road). This is an existing condition.

Mandatory Exception 2

Horizontal curves are designed based on design speeds. HDM Table 203.2 lists standard curve radii for specified design speeds. This standard cannot be met within the project right-of-way for Old Highway 395 (a County road). This is an existing condition.

Mandatory Exception 3

Corner sight distance is the clear line of sight between a vehicle waiting at the crossroad and an approaching vehicle. HDM Index 405.1(2)(b) dictates that in restrictive conditions the maximum corner sight distance is equal to the stopping sight distance values listed in Table 201.1. To increase the protection of vehicles at intersections from cross median accidents, the median barrier would be extended to the maximum extent possible at all signalized intersections. As a result, the standard corner sight distance cannot be achieved at Via Monserate and Gird Road.

Mandatory Exception 4

Stopping sight distance is the minimum length of highway ahead visible to the driver, which is to be provided on multilane highways. From HDM Index 201.1, standard stopping sight distances are listed in Table 201.1 for specified design speeds. There are several locations where this minimum standard cannot be met.

Mandatory Exception 5

Minimum shoulder widths are required for a conventional highway, as specified in HDM Index 302.1 and Table 302.1. Nonstandard shoulder widths are proposed at left-turn pockets to maintain the standard median width on the other side of the median barrier and the barrier's end treatments.

Mandatory Exception 6

Cable railing is installed on top of retaining walls that have a vertical fall of four (4) feet or more to protect highway workers from a potential fall risk. To maintain wildlife movement and minimize wildlife mortality within the project limits, 6-foot-high wildlife escape ramps are proposed at several openings in the southerly wildlife fencing. These ramps encourage animals trapped within the roadway right-of-way to safely jump down into the San Luis Rey River valley area. Installing cable railing across a ramp's retaining structure would increase the height that an animal must jump down from and could discourage wildlife from utilizing this feature.

Seven Advisory Design Standard Exceptions have been identified, as shown in Table 2-1b.

Table 2-1b. Advisory Design Exceptions

NONSTANDARD FEATURE	CORRESPONDING HDM STANDARD
1. Location and Design of Curb Ramps: One accessible ramp at each corner would be provided at the intersections of SR-76 with South Mission Road, Old Highway 395 (a County road) and the SR-76/I-15 northbound and southbound ramps.	HDM 105.4(2): On new construction, two ramps should be installed at each corner as shown on the Standard Plans.
2. Falsework: The construction of the SR-76/I-15 Separation would include a traffic opening of 49 feet.	HDM 204.8(5): The normal minimum width of traffic openings and required falsework spans for various lane and shoulder combinations should be as shown in Table 204.8.
3. Fill Slope: Use of 2:1 slope rate for embankment slopes along SR-76 throughout the project limits.	HDM 304.1: For new construction, widening or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter.

NONSTANDARD FEATURE	CORRESPONDING HDM STANDARD
4. Fixed Objects in Clear Recovery Zone: Traffic signal poles and controller cabinets would be located within the Clear Recovery Zone (CRZ) and would not be shielded.	HDM 309.1(2): Fixed objects including bridge piers, abutments, retaining walls, and noise barriers closer to the edge of traveled way than the distances listed above should be eliminated, moved, redesigned to be made yielding, or shielded in accordance with the following guidelines
5. Intersection Angle: The existing intersection angle of 65° at SR-76 and Old Highway 395 (a County road) is maintained.	HDM 403.3: When a right angle cannot be provided due to physical constraints, the interior angle should be designed as close to 90° as is practical, but should not be less than 75°. Mitigation should be considered for the affected intersection design features.
6. Compound Curve: The SR-76/I-15 Interchange includes nonstandard compound curves. These curves occur on the northbound on- and off-ramps as well as both loop ramps.	HDM 203.5: Where a compound curve is necessary, the shorter radius should be at least two-thirds the longer radius when the shorter radius is 1,000-feet or less. On one-way roads, the larger radius should follow the smaller radius.
7. Reversing Curves: The southbound on-ramp includes reversing curves. A 7,619-foot radius reversing curve follows a 5,250-foot radius curve with no connecting tangent. This is an existing condition.	HDM 203.6: When horizontal curves reverse direction the connecting tangents should be long enough to accommodate the standard superelevation runoffs given on Figure 202.5. If this is not possible, the 6 percent per 100-feet rate of change should govern (see Index 202.5(3)).

Advisory Exception 1

HDM Index 105.4 advises that, for all new construction, two pedestrian access ramps are required at each corner. In certain conditions, this is not desirable because it sets the stop bar well back from the intersection, creates a potential conflict for the light signal standard, or creates two potential areas where pedestrians gather. Because pedestrian traffic is expected to be low within the project limits, drivers would be less likely to watch out for pedestrians entering the crosswalks. To minimize the number of potential conflict points between drivers and pedestrians, a single curb ramp is proposed, at the midpoint of the curb return, at those intersections with expected pedestrian use.

Advisory Exception 2

Falsework would be used to support and construct the SR-76/ I-15 bridge widening. Minimum widths for openings to allow traffic to pass underneath the falsework are provided in HDM Index 204.8(5) and Table 204.8. A nonstandard traffic opening is proposed to maintain the minimum vertical clearance between the I-15 roadway and the falsework.

Advisory Exception 3

Per HDM Index 304.1, on projects with new construction, widening, or where slopes are otherwise being modified, embankment (fill) slopes should be constructed at a 4:1 (4 horizontal and 1 vertical) ratio or flatter. This suggested slope rate would substantially increase the footprint and the associated environmental impacts.

Advisory Exception 4

HDM Index 309.1 advises that fixed objects (unyielding objects when hit by an errant vehicle), including traffic signal poles and controller cabinets, that are within a certain distance from the

traveled way, also known as the clear recovery zone, be eliminated, moved or redesigned to be made yielding, or shielded in accordance with the listed guidelines. Traffic signal poles and controller cabinets would remain in the clear recovery zone and would not be shielded.

Advisory Exception 5

A right angle (90°) intersection provides the most favorable conditions for intersecting and turning traffic movements. HDM Index 403.3 states that when a right angle (90°) cannot be provided due to physical constraints, the angle should not be less than 75°. Old Highway 395 (a County road) currently intersects the SR-76 roadway at a 75° angle. This is an existing condition and would be maintained in the proposed condition.

Advisory Exception 6

A compound curve is a combination of two or more circular curves of different radius having their curvature in the same direction. For the design of a compound curve, HDM Index 203.5 advises that (1) the shorter curve radius, that is 1,000-feet or less, be at least two-thirds the longer radius or (2) that on one way roads, the larger radius curve should follow the shorter radius curve. For the four SR-76/I-15 interchange on-ramps, including the two loop ramps, this standard cannot be met.

Advisory Exception 7

A reverse curve is a curve, like the letter S, formed by joining two curves turning in opposite directions. HDM Index 203.6 advises that the two curves forming the reverse curve be connected by a tangent (straight length of roadway) that is long enough to accommodate the standard cross slope (superelevation) transition given in HDM Figure 202.5. The alignment of the SR-76/I-15 southbound on-ramp contains two reversing curves without a tangent. This is an existing condition that would be maintained.

Unique Features of the Build Alternatives

The Existing Alignment Alternative (Preferred Alternative) is north of the San Luis Rey River while the Southern Alignment Alternative would be primarily south of the river. The Southern Alignment Alternative would require two additional bridge structures over the San Luis Rey River while the Existing Alignment Alternative (Preferred Alternative) would not cross the river. The Southern Alignment Alternative would not provide direct access to SR-76 from any local street intersections between South Mission Road and Sage Road. Under the Southern Alignment Alternative, the current highway would be relinquished to the County of San Diego in good repair.

2.1.2 Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) follows the existing SR-76 to the maximum extent possible along the northern edge of the San Luis Rey River Valley (see Figures 2.1-2a through 2.1-2g). With this proposed alternative, the existing conventional highway would be expanded to four lanes, two eastbound and two westbound. The typical roadway width from edge of shoulder to edge of shoulder would be 93 feet. This alternative provides an economical construction cost while balancing impacts to the sensitive environmental resources and the private property located along the corridor.

The Existing Alignment Alternative (Preferred Alternative) includes the following design features and elements:

- The length of widening along SR-76 would be approximately 5.6 miles. The posted speed limit would be determined after construction upon completion of appropriate traffic studies and is anticipated to be 55 mph.
- Two westbound and two eastbound lanes would be separated by a median 22 to 42 feet wide (29-foot typical median width) with a concrete barrier.
- Earthwork quantities are estimated to be 130,000 cubic yards of cut and 910,000 cubic yards of fill. In an effort to minimize environmental impacts, an advisory design exception is requested to allow a slope rate of 2:1 for fill slopes. Any pile driving or explosives blasting would be limited/restricted to the hours of 7 a.m. to 7 p.m., Monday through Friday and would not be allowed on Saturday, Sunday, or holidays.
- The project design would be context-sensitive, thus recognizing the rural character of the adjacent communities. This would be achieved by constructing naturally appearing graded slopes, where feasible, that reflect pregraded contours or simulate natural terrain. Where space allows, undulating contour grading would be employed to minimize the typical straight cut and fill appearance of manufactured slopes. This method would soften the visual impact of long or high slope banks and reduce visual contrast with the existing terrain. Blasting and cutting of granite rock would be shaped, to the extent possible, to also achieve a rough, natural-appearing surface.
- The Existing Alignment Alternative (Preferred Alternative) includes existing pavement areas that would not be removed but would be used as an access point at Star Track Way/Sage Road. Acceleration and deceleration lanes would be added to enhance roadway operations, wherever feasible, during final design.
- Left-turn channelization and median openings would be provided at the following unsignalized intersections:
    - Sweetgrass Lane
    - Star Track Way/Sage Road access point
- Two-lane on-ramps are proposed for each of the SR-76/I-15 interchange on-ramps.
- A detention basin would be constructed along the Existing Alignment Alternative (Preferred Alternative) at the western side of the intersection of SR-76 and Ramona Drive.
- At-grade, signalized intersections would be constructed at South Mission Road, Via Monserate, Gird Road, Old Highway 395, the I-15 southbound ramps, and the I-15 northbound ramps. Construction of these signalized intersections would include standard safety lighting, which would be the only lighting provided as part of the project.
- Permanent wildlife fencing would be placed along the edge of the right-of-way in various locations between the San Luis Rey River and the Existing Alignment Alternative (Preferred Alternative). Wildlife escape areas would also be incorporated.
- The existing SR-76 bridge across Live Oak Creek and adjacent to Gird Road would be removed and the area revegetated and replaced with a wider, longer, higher bridge located to the south due to the realigned roadway. The proposed work would consist of

constructing a single-frame, three-span reinforced concrete slab bridge that would be approximately 105 feet long, 125 feet wide, and 11 feet above the existing stream surface. This bridge would also be used as an access point between trails north and south of SR-76 for hikers, bicyclists, and equestrians that are part of the San Luis Rey River Park.

- Between South Mission Road and just east of I-15, the proposed alignment is primarily located along the existing roadway alignment, but shifts north or south to provide for more gradual curves. In some locations on the current SR-76, remainder pavement sections would be removed and those areas would be revegetated to aid in achieving "net benefit" for the proposed project, as required by the TransNet ordinance.
- The existing two-span, single-frame, cast-in-place, prestressed, post-tensioned concrete box girder bridge structure over I-15 would be widened approximately 54 feet to the south, which would include extending the abutments and adding additional columns to support the construction. The widening would consist of building a new (cast-in-place box girder) bridge adjacent to the existing 64-foot bridge. The proposed bridge structure would match the existing structure depth and foundation type. The hexagonal flared columns would maintain the same shape and appearance of the existing columns; aside from these columns, no other architectural treatment is proposed.
- Underpasses would be used along the roadway to facilitate drainage and wildlife movement. The proposed underpasses would be constructed using pipe materials. These features would vary in width from approximately 3 to 10 feet, and would range in height to accommodate various sizes of wildlife.

Construction Staging

The Existing Alignment Alternative (Preferred Alternative) presents unique construction staging challenges, as the construction activities needed to widen an existing facility are balanced with the need to maintain existing traffic and access openings. Initial conceptual studies have identified potential construction staging issues, and final design would resolve the issues by using various construction techniques. The cost estimate for the Existing Alignment Alternative (Preferred Alternative) includes the anticipated costs for resolving these challenges.

It is anticipated there would be multiple construction phases, most likely two, for the proposed project. The first stage of construction would consist of all work at the SR-76/I-15 interchange, including bridge widening and ramp work. It would also include a portion of SR-76 that is identical in both alternatives from approximately 0.11 mile west of intersection of SR-76 and Old Highway 395 to just east of the SR-76/I-15 interchange. Construction would occur in a manner to maintain the current level of traffic flow on SR-76. The second stage would be construction of the portion of SR-76 between South Mission Road and 0.11 mile west of Old Highway 395. Traffic disruptions during construction are anticipated. Some delays may occur for short-term traffic handling. Because traffic control can be employed during the late-night and early morning hours, construction requiring lane closures would be conducted at night, as much as possible, to reduce traffic disruption. Lighting would be shielded away from sensitive vegetated areas, residential areas, and the San Luis Rey River when construction occurs at night. Construction staging would occur within Caltrans rights-of-way in areas that do not contain sensitive resources.

The current project schedule anticipates a final environmental document in 2011 and approval of the Record of Decision (ROD) in 2012. Design for Stage I of this project (the interchange) is

expected in 2012. Design for Stage II (the roadway) is expected in 2013. Construction completion is expected in 2015.

Construction Costs

The estimated cost of construction for the Existing Alignment Alternative (Preferred Alternative), including improvements to the I-15 interchange using the partial cloverleaf interchange design variation, would be approximately $201 million (construction: $137 million; right-of-way: $17 million; support: $45 million; biological mitigation: $53 million). The Existing Alignment Alternative, with the partial cloverleaf interchange, has been identified as the Preferred Alternative. The estimated cost of construction for the Existing Alignment Alternative (Preferred Alternative), including improvements to the interchange using the spread diamond interchange design variation, would be approximately $206 million (construction: $101 million; right-of-way: $17 million; support: $35 million; biological mitigation: $53 million).

2.1.3 Southern Alignment Alternative

The Southern Alignment Alternative would widen and realign SR-76 from South Mission Road to just east of I-15. Portions of the alignment are south of the San Luis Rey River. As with the Existing Alignment Alternative (Preferred Alternative), the facility would have four lanes. The total roadway width from edge of shoulder to edge of shoulder would be typically 93 feet. The Southern Alignment Alternative would require two new bridges crossing the San Luis Rey River, the first just east of South Mission Road and the second near Star Track Way (see Figures 2.1-3a through 2.1-3g).

The existing SR-76 roadway would be relinquished to the County of San Diego in good repair per a revised Freeway Agreement and is anticipated to function as a frontage road for local access. Section 73 of the Streets and Highways Code requires that the “highway” must be placed in a “state of good repair” prior to relinquishment of routes and also specifies “state of good repair” shall not obligate Caltrans for widening, new construction, or for major reconstruction, unless specifically directed by the California Transportation Commission. As a County road, it would be upgraded and maintained by the County. Any future improvements would be constructed by the County and reviewed under a separate environmental process. Only biological impacts were estimated at the request of the resource agencies during the NEPA 404 process and are discussed in Sections 3.20 through 3.25.

The Southern Alignment Alternative includes the following design features and elements:

- The length of the realignment and widening would be approximately 5.6 miles and the posted speed limit would be determined after construction upon completion of appropriate traffic studies and is anticipated to be 55 mph.
- Two westbound and two eastbound lanes would be separated by a 22- to 42-foot-wide median with a concrete barrier.
- Preliminary earthwork quantities are currently estimated to be 20,000 cubic yards of cut with 990,000 cubic yards of fill. To minimize environmental impacts, an advisory design exception is requested to allow a slope rate of 2:1 for fill slopes. Any pile driving or explosives blasting would be limited/restricted to the hours of 7 a.m. to 7 p.m., Monday through Friday and would not be allowed on Saturday, Sunday, or holidays.

- For the Southern Alignment Alternative, a frontage road is proposed, which would use the section of the existing SR-76 roadway between Sweetgrass Road and Sage Road that is left over as the alignment shifts to the south. This frontage road would terminate in cul-de-sacs on the westerly and easterly termini. This frontage road would be relinquished to the County of San Diego in good repair and would be reclassified as a Light Collector within San Diego County's circulation plan. Although San Diego County may propose to upgrade certain roadway features in the future, the existing alignment and profile of the roadway would remain unchanged, retaining the existing curves, narrow shoulder widths, sight distances, and side street access issues that are currently observed for the existing SR-76 facility.
- Left-lane channelization would be provided at the following intersections:
    - South Mission Road
    - Frontage Road (West), Existing SR-76
    - Frontage Road (East), Existing SR-76
    - Old Highway 395
    - I-15 southbound ramps
    - I-15 northbound ramps
- At-grade, signalized intersections would be constructed at the western and eastern intersections of the frontage roads, Old Highway 395, South Mission Road, the I-15 southbound ramps, and the I-15 northbound ramps. Construction of these signalized intersections would include standard safety lighting, which would be the only lighting provided as a part of the project.
- Permanent wildlife fencing between the San Luis Rey River and the Southern Alignment Alternative would be placed along the edge of the right-of-way. Wildlife escape areas would also be incorporated.
- The first proposed river crossing (just east of South Mission Road) consists of building a two-frame, eight-span, cast-in-place, prestressed, post-tensioned concrete box girder bridge with a minimum depth-to-span ratio of 0.04, which would span over the 100-year floodplain of the San Luis Rey River (Figure 2.1-3a). The cast-in-place structure would be built on falsework erected in the floodplain during the dry season. The finished bridge would have a length of approximately 1,332 feet, carrying two lanes of traffic in each direction. Rock slope protection (RSP) would likely be required to protect the bridge abutments and approach roads against scour. This river crossing would be supported on 16-inch cast-in drilled-hole concrete piles.
- The second proposed river crossing (near Star Track Way) consists of building a single-frame, four-span, cast-in-place, prestressed, post-tensioned concrete box girder bridge with a minimum depth-to-span ratio of 0.04, which would span over the 100-year floodplain of the San Luis Rey River (see Figure 2.1-3f). The cast-in-place structure would be built on falsework erected in the floodplain during the dry season. The finished bridge would have a length of 780 feet, carrying two lanes of traffic in each direction. RSP would likely be required to protect the bridge abutments and approach roads against scour. This river crossing would be supported on 16-inch cast-in drilled-hole concrete piles.
- Underpasses would be used along the roadway to facilitate drainage and wildlife movement. The proposed underpasses would be constructed using pipe materials. These features would vary in width from approximately 3 to 10 feet, and would range in

height to accommodate various sizes of wildlife. Two open-span bridges would also be constructed across the San Luis Rey River. One of the proposed underpasses would accommodate pedestrians and would allow the private owner of the property to access both sides of the parcel.

Construction Staging

It is anticipated there would be multiple construction phases, most likely two, for the proposed project The first stage of construction would consist of all work at the SR-76/I-15 interchange, including bridge widening and ramp work. It would also include a portion of SR-76 that is identical in both alternatives from approximately 0.11 mile west of intersection of SR-76 and Old Highway 395 to just east of the interchange. Construction would occur in a manner to maintain the current level of traffic flow on SR-76.

The second stage would be construction of a portion of SR-76 between South Mission Road and 0.11 mile west of Old Highway 395 along the new proposed southern alignment. The majority of construction would occur away from the existing SR-76. Some disruptions would occur at the connection points between the existing and proposed new roadway. Some delays could occur for short-term traffic handling. Grading would be conducted at night, as much as possible, to reduce disruptions. Lighting would be shielded away from sensitive vegetated and residential areas when construction or grading occurs at night. Construction staging would occur within Caltrans rights-of-way in areas that do not contain sensitive resources.

The current project schedule anticipates a final environmental document and approval of the ROD in 2012. Design for Stage I of this project is expected in 2012. Design for Stage II is expected in 2013. Construction completion is expected in 2015.

Construction Costs

Construction costs for the Southern Alignment Alternative with the partial cloverleaf interchange design variation would be approximately $322 million (construction: $133 million; right-of-way: $94 million; support: $42 million; biological mitigation: $53 million). Construction costs for the Southern Alignment Alternative with the spread diamond interchange design variation would be approximately $319 million (construction: $130 million; right-of-way: $94 million; support: $42 million; biological mitigation: $53 million).

2.1.4 No Build Alternative

The “No Build” Alternative represents the option of no action. Under the No Build Alternative, no new SR-76 facilities would be constructed and the current SR-76 would continue to serve as the principal access between South Mission Road and I-15. This alternative would not propose any changes to the existing number of lanes or the configuration of existing intersections along the corridor. The No Build Alternative would retain its original design features such as tight curve radii, narrow shoulders, and limited sight distances. With the No Build Alternative, traffic would continue to increase, which would cause longer delays and further degrade level of service (LOS). The No Build Alternative would not improve access for bikes and pedestrians. The No Build Alternative would not provide arterial or interchange capacity or operational improvements. The No Build Alternative would not meet the purpose and need.

2.1.5 Transportation System Management and Transportation Demand Management Alternatives

Transportation System Management (TSM) strategies consist of actions that increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Transportation Demand Management (TDM) focuses on regional means of reducing the number of vehicle trips and vehicle miles traveled, plus increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience.

Although TSM measures alone could not satisfy the purpose and need of the project, the measures described below have been incorporated into the build alternatives for this project.

Current transit service on SR-76 consists of North County Transit District (NCTD) Route 306, which runs from Vista to Fallbrook via Mission Road. A BREEZE bus stop is also located along SR-76 east of I-15 (Route 388). In addition, various bus stops occur within the project limits. There is a Riverside Transit Agency bus stop at the Park and Ride. The proposed project would incorporate 10-foot-wide paved outside roadway shoulders to accommodate pedestrians, bicyclists, and emergency parking. Sidewalks are proposed on both sides of SR-76 from the intersection with Old Highway 395 to the intersection with the I-15 northbound ramps. The project also proposes improvements to the northern Park and Ride facility to encourage ride sharing. The facility is currently located immediately northwest of the SR-76/I-15 interchange between I-15, SR-76, and Old Highway 395 (see Figure 2.1-4), with access from Old Highway 395 within current Caltrans right-of-way. An area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way.

For the proposed Existing Alignment Alternative (Preferred Alternative), two-lane on-ramps are proposed for all of the SR-76/I-15 interchange on-ramps. Each on-ramp would have a designated HOV lane. A 1,000-foot-long auxiliary lane is proposed for the I-15 northbound on-ramps.

The California High Speed Rail Authority and the Federal Rail Administration have proposed the California High-Speed Train project, connecting the San Francisco Bay Area to Los Angeles, and later to Sacramento and San Diego. The proposed statewide high-speed rail line system would eventually consist of 800 miles of dedicated state-of-the-art track with trails capable of speeds up to 220 mph. The route would be constructed at grade in an open trench, below grade in a bored tunnel, or above grade on an elevated guideway, depending on terrain, physical constraints, environmental impacts, and community input along sections of the line. Preliminary plans indicate a rail route alternative that would follow I-15 into San Diego County and may cross SR-76 in the future. Any interchange improvements or accommodation of the rail alternative would be addressed as part of the High Speed Rail Authority's environmental review and documentation.

2.2 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The Existing Alignment Alternative (Preferred Alternative), including the SR-76/I-15 partial cloverleaf Interchange design variation (DV-1), would have the least overall environmental impacts, meets the proposed project's purpose and need, meets current Caltrans design requirements, and is supported by resource agencies.

In April 2006, Caltrans signed an interagency MOU (NEPA MOU) committing to integrate NEPA and Section 404 of the CWA into transportation planning, programming, and implementation stages for federal aid surface transportation projects requiring a permit under Section 404. In September 2008, Caltrans began coordination efforts with federal and state resource and regulatory agencies, including USACE, USFWS, USEPA, NOAA Fisheries Service, CDFG, and RWQCB, who were invited to participate in discussions to implement the MOU. These early coordination meetings allow time to review the proposed plans and discuss permit requirements, potential problems, timeframes, and ways to change the project to reduce or further minimize impacts. Early involvement also helps to avoid potential delays in project delivery and minimize potential changes in the project scope that may result in project cost increases. The integration process comprises three checkpoints, which punctuate ongoing coordination efforts. These checkpoints are (a) Purpose and Need; (b) Identification of the Range of Alternatives, the range of alternatives checkpoint also includes consideration of the criteria used to select and analyze the range of alternatives to be studied in the draft EIS; and (c) Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) Determination and Conceptual Mitigation Plan. The response may be a comment, agreement or disagreement. Additionally, USACE may submit a concurrence or nonconcurrence at the LEDPA checkpoint. The response terms (comment, agree, disagree; and for the USACE, concur/non-concur) reflect the regulatory responsibilities of the responding agencies at different points in the NEPA and CWA Section 404 processes.

Existing Alignment Alternative (Preferred Alternative)

After public review of the Draft EIR/EIS and full consideration of the technical studies prepared, public comments, Native American input, and resource agency input, Caltrans identified the Existing Alignment Alternative as the preliminary Preferred Alternative. Caltrans' selection was presented to the resource and regulatory agencies at the January 26, 2011, NEPA MOU meeting. In letters to USEPA, USFWS, NOAA Fisheries Service, and USACE dated February 28, 2011, Caltrans asked for concurrence on the selection. All four of the agencies concurred with Caltrans' selection: USFWS in a letter dated March 22, 2011; USEPA in a letter dated March 25, 2011; NMFS in a letter dated March 29, 2011; and USACE in a letter dated April 18, 2011.

This EIR/EIS finds that the Existing Alignment Alternative would have no substantial impacts after mitigation. The Southern Alignment Alternative, after mitigation, would have remaining substantial impacts on land use, growth, community character and cohesion, and relocations and real property acquisitions. These impacts are discussed in the appropriate sections of this EIR/EIS. The Existing Alignment Alternative would also be a more cost-effective solution to the proposed project's purpose and need.

- The total estimated cost for the Preferred Alternative is $201 to $206 million, compared to $319 to $322 million for the Southern Alignment Alternative. The following additional factors were considered in the Preferred Alternative identification process. The SR-76 Financial Plan is being prepared for submittal to FHWA in approximately March 2012.

- The Southern Alignment Alternative would generally impact less acreage of sensitive vegetation compared to the Existing Alignment Alternative. The Existing Alignment Alternative would permanently impact 32.65 acres and temporarily impact 10.60 acres of riparian and wetland habitat, while the Southern Alignment Alternative would permanently impact 15.37 acres and temporarily impact 4.54 acres of riparian and wetland habitat. The Existing Alignment Alternative would permanently impact 35.81

acres and temporarily impact 24.52 acres of upland habitat, while the Southern Alignment Alternative would permanently impact 33.28 acres and temporarily impact 33.28 acres of upland habitat. However, because the Existing Alignment Alternative would largely follow the route of existing SR-76 through an area of semirural development, it would have less effect on the functions and values of the remaining sensitive vegetation. The Southern Alignment Alternative would affect an area of greater biological diversity in which there is little development with no major roads paralleling the river.

- The Existing Alignment Alternative would be entirely on the northern side of the river with no river crossings. The Southern Alignment Alternative would cross the river in two places, resulting in vegetative changes in the riparian corridor and shading of riparian habitat by the bridges; introducing noise, light, and glare to the riparian corridor; and decreasing ecosystem stability. The Existing Alignment Alternative would not affect the ecosystem south of the river.

- Both alternatives would impact wildlife movement in the San Luis Rey River regional wildlife movement corridor. The Existing Alignment Alternative would largely follow the existing wildlife barrier of the SR-76 highway but would widen the barrier. Wildlife directional fencing, undercrossings, and a bridge at Live Oak Creek may decrease wildlife road mortalities. The Southern Alignment Alternative would be constructed on a berm and would incorporate open-span bridges, directional fencing, and undercrossings, but would create a new barrier to wildlife movement where none now exists.

- The San Luis Rey River Valley and floodplain are highly valued as habitat and as a regionally important wildlife movement corridor. The Preferred Alternative would be entirely on the northern side of the river where there is existing rural residential development and would not cross the river. The Southern Alignment Alternative would cross the river in two places; there are currently no road crossings of the river in the project area and no barriers to wildlife movement in the river riparian corridor.

- The Preferred Alternative would encroach into less of the San Luis Rey River 100-year floodplain and have less effect on the water surface elevation in the event of a 100-year flood. The Southern Alignment Alternative would encroach into 79.2 acres of the 100-year floodplain and increase the water surface elevation a maximum of 6.7 inches. The Preferred Alternative would encroach into 55.9 acres of the 100-year floodplain and increase the water surface elevation a maximum of 3.0 inches.

- The Preferred Alternative would follow the route of existing SR-76 as much as possible through areas of semirural residential development. The Southern Alignment Alternative would create a new major road where there are currently no paved public roads in an area designated by the County for very low density development. The Southern Alignment Alternative would leave existing SR-76 in place; Caltrans would relinquish it to the County in good repair. If the road was upgraded to meet County standards, additional impacts would result north of the river.

- The San Luis Rey River and associated riparian habitat have been identified as an important regional wildlife movement corridor in northern San Diego County, and are identified as a Pre-Approved Mitigation Area (PAMA) in the Draft North County Multiple Species Conservation Plan (NCMSCP). The Existing alignment Alternative would have

fewer impacts to land use, growth, relocations, and wildlife connectivity within a PAMA of the NCMSCP than the Southern Alignment Alternative.

- The Existing Alignment Alternative would primarily follow the current SR-76 roadway north of the San Luis Rey River, while the Southern Alignment Alternative would introduce a new transportation corridor south of the river. From a visual perspective, the Existing Alignment Alternative would result in lower overall visual impacts compared to the Southern Alignment Alternative. Both alternatives would require major grading resulting in landform alterations, disturb existing mature vegetation, and add a substantial amount of paved surface area, but the Southern Alignment Alternative would include the construction of new bridge structures along with other associated roadway features in a largely undeveloped area.

- An improved SR-76 is recognized in local planning documents on the existing alignment. In the adopted County General Plan (GP 2020), the Circulation Element shows SR-76 as a major road north of the San Luis Rey River. The Southern Alignment Alternative is inconsistent with local planning documents, since it would add an additional transportation element south of the river that is not currently recognized in local planning.

- The Southern Alignment Alternative, by providing access to lands south of the river, could increase pressure to allow development in that area where only very low density development, and no major roads, exist or are planned. Greater indirect impacts to sensitive habitats and the rural community character would occur.

- The Existing Alignment Alternative would cause a smaller increase in velocities of water in the San Luis Rey River channel during flooding. The Existing Alignment Alternative would not cause existing nonerosive velocities to increase to erosive velocities for either 10-year or 100-year storms. At the two bridge crossings in the Southern Alignment Alternative, columns and abutments could create the potential for nonerosive velocities to increase to erosive velocities.

- The Southern Alignment Alternative would result in greater impacts to critical habitat for least Bell's vireo and southwestern arroyo toad, compared to the Existing Alignment Alternative. Overall, the Southern Alignment Alternative is more likely to constrict wildlife movement, including that of the endangered Southern California distinct population segment of Southern California steelhead trout (*Oncorhynchus mykiss*).

Partial Cloverleaf Interchange Design (DV-1) (Preferred Alternative)

The Preferred Alternative proposes to modify the existing SR-76/I-15 spread diamond configuration to a partial cloverleaf configuration by adding loop on-ramps in the northwest and southeast quadrants of the interchange. The partial cloverleaf interchange design (DV-1) would widen the bridge structure over I-15 to six lanes, consisting of two through lanes in each direction and one right-turn lane in each direction. The existing on-ramps and off-ramps would also be modified and loop on-ramps added. A 1,000-foot auxiliary lane to northbound I-15 would be constructed.

Because left turns onto and off of the ramps create potential points of traffic conflict, adding loop on-ramps eliminates the need for left turns and would, therefore, increase traffic operation

efficiency. In addition, loop ramps provide better long-term flexibility beyond the 2030 design year.

Although the cost of this design variation is higher than the other design variation, the partial cloverleaf interchange represents a more desirable design because it would allow opportunities to improve interchange operation. A partial cloverleaf interchange configuration would provide a substantial improvement in LOS when compared to either the current condition or to the spread diamond interchange design variation (DV-2). Also, this design option does not require a design exception for the southbound auxiliary lane, which would be needed for DV-2, and would potentially allow for a narrower footprint on the ramps and cross street. A partial cloverleaf interchange configuration would potentially require less right-of-way off the structure, and preliminary design studies indicate that construction activities may be more easily staged than with a spread diamond interchange.

A partial cloverleaf interchange would require a Modified Access Agreement with Federal Highway Administration (FHWA). In April 2011, a preliminary Modified Access Report (MAR) was submitted to FHWA, and a “Finding of Acceptability” letter was obtained from FHWA on May 25, 2011. A final MAR would be submitted after final approval of the Project Report and the final EIR/EIS is certified and approved.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION PRIOR TO DRAFT EIR/EIS

Several alternatives were studied that were eliminated from consideration during the preparation of the Draft EIR/EIS. An alternatives comparison matrix is provided in Table 2-2 detailing the potential impacts associated with these alternatives. As identified in Table 2-2, Alternatives 2, 4, and 6 have been evaluated in detail in this EIR/EIS as the Existing Alignment Alternative (Preferred Alternative), the Southern Alignment Alternative, and the No Build Alternative. The overall level of environmental impact associated with these previously considered alternatives is generally greater than those associated with the proposed build alternatives. All roadways proposed would have been four-lane facilities.

Existing Alignment Alternative – 70-mph Design Speed (Alternative 1)

This alignment would have followed the northern edge of the San Luis Rey River, closely following the path of the Existing Alignment Alternative (Preferred Alternative) discussed in this report, and defines the maximum potential project footprint. The major difference, due to the higher design speed, is the increased overall roadway width. The higher design speed requires larger curve radii and longer tangents. The 70-mph design speed results in a total roadway width (measured between outside shoulder extents) of 128 feet. The increase in roadway width would have resulted in higher levels of impact to community character and cohesion, including one additional residential relocation, additional right-of-way acquisition, and an increase in direct impacts to sensitive environmental resources such as wetlands and habitat. This alternative would not meet the objective of “protecting and/or enhancing the natural environment along the SR-76 corridor” as well as the alternatives being carried forward.

Southern Alignment Alternative – Old Southern Alignment Alternative (Alternative 3)

This alignment would have been located farther north of the path of the Southern Alignment Alternative discussed in this report. This alternative crossed the San Luis Rey River east of South Mission Road and generally followed the southern side of the river, and then recrossed

the river to converge with the existing roadway near Star Track Way. This alternative would have traveled along the northern boundary of the Vessels property. This alternative would have required two large bridges in slightly different locations than those needed for the currently proposed Southern Alignment Alternative. The placement of these bridges would have resulted in a rise in the floodplain of more than 1 foot. The area south of the roadway would be removed from the floodplain and could result in impacts to both the hydrologic regime of the river and biological resources, such as sensitive habitat and species, in the vicinity of the project.

Due to its location in the floodplain and the need to elevate the roadway along a large section of the alignment, the roadway would be extremely expensive to construct. If intermittent crossing structures were required to minimize hydraulic impacts to the floodplain or to provide for wildlife movement, the project cost would increase further. As a result of potential impacts associated with this alternative, the current Southern Alignment Alternative was developed to minimize floodplain and biological effects, and reduce costs associated with constructing an elevated roadway. This proposed alternative would have increased impacts to sensitive habitats, floodplains, and waters and wetlands and therefore was not carried forward for further consideration.

Northern Alignments (Alternatives 5 and 6)

Two separate alternatives were developed to explore the possibility of routing SR-76 farther north of the river through the hilly terrain of Bonsall and Fallbrook. One alternative would have used tunnels to traverse the terrain, while another alternative did not require tunnels. These options were considered because they would remove many impacts associated with construction in the San Luis Rey River Valley. However, due to prohibitively high project cost estimates (ranging from approximately $600 million to $750 million), along with increased impacts to community cohesion, aesthetic values, and biological resources, the northern alignment(s) options were withdrawn from further consideration. Both alternatives would bisect the rural communities of Bonsall and Fallbrook, and would likely result in some local road closures, affecting local community access. Large cut and fill slopes (up to 200 feet in height) could be required along the major portions of the alignment due to the varied topography in the area. Such dramatic slopes would have substantially affected the visual character of the area, and would increase the visibility of a new facility in the rural area. The alternatives would traverse sensitive upland habitats such as coastal sage scrub, which could support sensitive species, including California gnatcatcher. Neither alternative met the project objectives to protect and/or enhance the human and natural environment or to protect and maintain community character and cohesion and the rural landscape, and neither was carried forward for further consideration.

Wetland Avoidance Alternatives

Two Wetlands Avoidance Alternatives were studied with the objective of avoiding all impacts to jurisdictional waters, including wetlands. Both these alternatives would have had substantial impacts to the social and natural environments that would be avoided by the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. Both would have had considerable engineering and construction challenges and would have added substantially to the cost of construction. While both these alternatives would have avoided the San Luis Rey River wetlands, both would have impacted wetlands associated with other drainages (including Live Oak Creek north of the river) that flow generally north-south and are tributaries of the San Luis Rey River, so that complete avoidance of impacts to wetlands was not possible. Once it

was recognized that pursuing a Wetlands Avoidance Alternative was not a viable option, efforts were focused on minimizing the wetland impacts of the two viable design alternatives.

The Wetlands Avoidance Alternative for an alignment north of the San Luis Rey River would have required an alignment farther north than the current SR-76 roadway from South Mission Road to Star Track Way, passing through more rugged terrain in two segments to avoid wetlands in the San Luis Rey River corridor. The northern Wetlands Avoidance route would have required relocations of local road intersections and possible realignment of local road segments. The current SR-76 roadway would have been retained and relinquished to San Diego County (County) as a frontage road and for local access. Additional wetland encroachment would be required if the relinquished roadway needed improvement to meet current County standards.

Because of the terrain, either massive cut and fill slopes or tunneling would have been required through two areas to maintain an acceptable vertical profile and a four-lane cross-section. Either option would have resulted in a large footprint of topographic disturbance, requiring property acquisitions and relocation of residents. In addition, new access to numerous properties near the route would have been required. These disturbances would have contributed to impacts on the social environment, visual impacts of the roadway from grading in a rural setting, impacts on community cohesion and character north of the river, impacts to known cultural resources, and considerable impacts to upland habitats.

The Wetlands Avoidance Alternative for an alignment south of the San Luis Rey River was also studied. Such an alignment would require three bridges across the San Luis Rey River. Two bridges would be in approximately the same locations as those for the Southern Alignment Alternative, but would have to be longer so that abutments or supporting columns were not sited in the wetlands. The western (downstream) bridge would have to be extended approximately 3,200 feet and the eastern (upstream) bridge would have to be extended approximately 500 feet.

A third, separate bridge would need to be constructed adjacent to the western bridge to connect existing SR-76 to the new SR-76 alignment, since the new alignment would be higher than the existing roadway. All three bridges would require methods of design and construction that would avoid placing any elements of the bridges or the falsework used to construct them in the wetlands. Both the northern Wetlands Avoidance Alternative and the southern Wetlands Avoidance Alternative would require relocating the intersection with South Mission Road. That intersection was designed as part of the SR-76 Melrose Drive to South Mission Road project and is currently under construction.

In sum, both of the wetlands avoidance alternatives would have increased the project footprint, increased project impacts, substantially impacted the community and social environment, extended the design and construction schedule, and added an estimated $150 to $360 million to the project cost. For these reasons, the Wetlands Avoidance Alternatives were not pursued further and, with the concurrence of the resource agencies, were withdrawn from consideration.

Floodplain Avoidance Alternative

Alternatives to avoid impacts to the floodplain were researched early in the project development process. High construction costs associated with lengthy bridges made these alternatives not viable to develop further for project options. The Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative both had variations of the different sizes and

placement of the viaducts to avoid floodplain impacts. These variations are discussed below. In the existing alignment of SR-76, the intersection of South Mission Road and SR-76 is within the 100-year floodplain. Therefore, avoidance of the floodplain by either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative would require raising the SR-76/South Mission Road intersection above the flood level without placement of fill in the floodplain. A viaduct or bridge structure would be needed to do so.

The Existing Alignment Alternative (Preferred Alternative) requires berm construction (placement of imported fill in the floodplain) from South Mission Road to 1,200 feet east of Star Track Way, with encroachment into 55.9 acres of the floodplain. Some encroachment would occur for the entire length of this stretch of SR-76. To entirely avoid impacts to the floodplain in this stretch, the bridge or viaduct at the South Mission Road intersection would need to be extended the entire distance to the eastern limit of the encroachment (1,200 feet east of Star Track Way). Based on the length of this bridge, construction would add approximately $280 million to the cost of the project.

Encroachment into the floodplain by the Southern Alignment Alternative would occur within the same limits as for the Existing Alignment Alternative (Preferred Alternative) and would involve the entire length from South Mission Road to 1,200 feet east of Star Track Way. In this segment, the Southern Alignment Alternative would encroach into 79.2 acres of floodplain. To avoid this encroachment, the Southern Alignment Alternative would require a viaduct structure similar to the one required for the Existing Alignment Alternative (Preferred Alternative) within the same limits. A structure of this length would add approximately $290 million to the cost of this project.

Design of the two build alternatives evaluated in this document focused on minimizing floodplain encroachment to the extent possible. For the Existing Alignment Alternative (Preferred Alternative), the design as proposed would result in a maximum 3-inch increase in the water surface elevation. The design of the Southern Alignment Alternative would result in a maximum increase in water surface elevation of 6.7 inches. Neither of the proposed build alternatives would support incompatible floodplain development, interrupt any transportation routes upstream, or substantially increase risks to life or property. These factors, balanced against the greatly increased cost of floodplain avoidance, led to elimination of the floodplain avoidance alternative from consideration as part of either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative.

Lilac Road Alternative

The Lilac Road Alternative was reviewed when proposed by USFWS and CDFG staff during initial scoping and early NEPA 404 meetings. Currently, SR-76 is an east/west conventional highway beginning at I-5 and terminating in the east at SR-79 near Lake Henshaw. The Lilac Road proposal suggested construction of SR-76 farther to the south along Lilac Road with a new interchange at the intersection of Lilac Road and I-15. Two of the greater issues with the Lilac Road alternative are (1) the lack of continuity in the route, including termini on the west and east side of I-15, which results in out-of-direction travel since there is no parallel route at Lilac Road east of I-15; and (2) the mountainous topography in that area. Also, the distance between the new Lilac Road interchange and that of the existing SR-76/I-15 interchange would not meet FHWA standards for 2-mile interchange spacing in rural environments and would require a new access point approval from FHWA.

The Lilac Road structure was built in 1978 as a cast-in-place arched bridge that is several hundred feet above the I-15 freeway. It is 40 feet wide (one lane each way) and spans 695 feet between the solid granite walls on either side of I-15. Due to the construction type and size, widening the structure to provide adequate capacity would be impractical. Areas of I-15 adjacent to and below this arched bridge decrease in elevation, making ramp connection design and construction more difficult. Due to the elevation difference and the grades of the roads involved, it would require approximately 0.75 to 1 mile in each direction to connect ramps from Lilac Road to the freeway to satisfy Caltrans Design Standards for ramps (maximum 8 percent grade). The bedrock in this area is mainly granite. To connect ramps to I-15 would require substantial grading, drilling, and blasting to meet design standards. This would create a larger-than-usual impact footprint for the interchange. Also, Old Highway 395 is less than 0.5 mile from I-15 and realigning SR-76 could require modifications to the Lilac Road/Old Highway 395 intersection, which would increase project costs. Motorists traveling to destinations along SR-76 east of I-15 and those traveling from east to west would have to travel approximately 3 miles out of direction, as there is no parallel route at Lilac Road to serve travelers who desire to go to destinations east of I-15.

Constructing SR-76 on this proposed new alignment would have required a much wider right-of-way footprint than currently exists for Lilac Road. The proposed new right-of-way and/or construction easements would require encroachments on a fire station and a school, and would require relocation of numerous residents located along Lilac Road. This alignment would also include sensitive habitat, noise, and visual impacts to a rural area currently not subjected to the highway-traveling public. Therefore, the Lilac Road Alignment was not carried forward for further consideration.

2.4 PERMITS AND APPROVALS NEEDED

The permits listed in Table 2-3 would be required. Caltrans would continue to work closely with all of the agencies to maintain communication and coordination throughout the project development process and receipt of the various permits (see Chapter 5).

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Table 2-2. SR-76 South Mission Road to I-15 Alternatives Comparison Table – July 2009
(Alternatives Evaluated into the EIR/EIS Updated October 2011)

Criteria	Measured Parameter	Alt. 1 – Existing Alignment 70-mph Design Speed	Alt. 2 – Proposed Existing Alignment Alternative (Preferred Alternative)	Alt. 3 – Southern Alignment North (old southern)	Alt. 4 – Proposed Southern Alignment Alternative South (new southern)	Alt. 5 – Northern Alignment without Tunnels	Alt. 6 – Northern Alignment with Tunnels	No Build
1. Traffic Flow and Congestion	Travel times for existing and 2030 facility.	• Increased capacity, reduced traffic congestion, increased design speed, and reduced travel times compared to the existing facility.	• Increased capacity, reduced traffic congestion, increased design speed, and reduced travel times compared to the existing facility.	• Increased capacity, reduced traffic congestion, increased design speed, and reduced travel times compared to the existing facility.	• Increased capacity, reduced traffic congestion, increased design speed, and reduced travel times compared to the existing facility.	• Increased capacity, reduced traffic congestion, increased design speed, and reduced travel times compared to the existing facility.	• Increased capacity, reduced traffic congestion, increased design speed, and reduced travel times compared to the existing facility.	• Travel times would increase over time without the proposed project.
2. Traffic Flow and Congestion	Daily vehicle delay times compared to No Build.	• Levels of service (LOS) at roadway intersections would likely be similar to those for Alternative 2, which would represent a decrease in delay times and improvement over existing conditions.	• Improvement of LOS at all intersections to LOS C or better as compared to No Build conditions, with a decrease in delay times and improvement over existing conditions.	• LOS at roadway intersections would likely be similar to those for Alternative 4, which would represent a decrease in delay times and improvement over existing conditions.	• Improvement in LOS for both the proposed SR-76 alignment and the relinquished existing alignment (which would become a San Diego County road) to LOS D or better.	• Decreased delay times, which would be an improvement over existing conditions.	• Decreased delay times, which would represent an improvement over existing conditions.	• Increased delay times over time without the proposed project. • Five intersections would operate at LOS F in both the AM and PM peak hours. • Three intersections would operate at LOS E in the AM and LOS F in the PM.
3. Traffic Circulation	Out-of-direction travel, impacts to local circulation networks.	• This alternative would result in restriction of left turns and out-of-direction travel impacts at all unsignalized intersections. • Increased travel times for motorists who would need to travel to a signalized intersection to make a U-turn.	• Restriction of some left turns and out-of-direction travel impacts at unsignalized intersections. • Increased travel times for motorists who would need to travel to a signalized intersection to make a U-turn.	• Loss of direct access from SR-76 for residences, businesses, and community facilities between the intersections of South Mission Road and Sage Road along the existing roadway.	• Loss of direct access from SR-76 for residences, businesses, and community facilities between the intersections of South Mission Road and Sage Road along the existing roadway.	• No direct access to SR-76 for residences, businesses, and community facilities east of Gird Road and west of Old Highway 395.	• No direct access to SR-76 for residences, businesses, and community facilities east of Gird Road and west of Old Highway 395.	No impacts.
4. Federal Emergency Management Agency (FEMA) 100-year Floodplain	Acres of fill within the 100-year floodplain. Number of inches of 100-year floodplain elevation rise.	• 84.6 acres • Floodplain elevation rise of + 0.5 feet	• 55.9 acres • Floodplain elevation rise of 3.0 inches	**Southern Alignment** • 97.3 acres **Existing SR-76 Upgrade*** • 23.7 acres **Southern Alignment** • Floodplain elevation rise of +2.2 feet **Existing SR-76 Upgrade*** • No change in floodplain elevation	• 79.2 acres • Floodplain elevation rise of 6.7 inches	**Northern Alignment** • 39.2 acres **Existing SR-76 Upgrade*** • 14.2 acres **Southern Alignment** • Floodplain elevation rise of +0.3 feet **Existing SR-76 Upgrade*** • No change in floodplain elevation	**Northern Alignment** • 35.2 acres **Existing SR-76 Upgrade*** • 14.2 acres **Southern Alignment** • Floodplain elevation rise of + 0.3 feet **Existing SR-76 Upgrade*** • No change in floodplain elevation	No impacts.
5. USACE Jurisdictional Waters, Including Wetlands	Acres – permanent and temporary impacts to functionality and value.	Unvegetated waters: • Permanent: 0.2 acre • Temporary: 0 acres Wetlands: • Permanent: 9.7 acres • Temporary: 1.3 acres	Unvegetated waters: • Permanent: <0.1 acres • Temporary: 0.0 acre Wetlands • Permanent: 4.6 acres • Temporary: 4.0 acres	**Southern Alignment** Unvegetated Waters • Permanent: 0.4 acre • Temporary: 0 acres Wetlands • Permanent: 10.7 acres • Temporary: 0.9 acre **Existing SR-76 Upgrade*** Unvegetated Waters • Permanent: 0 acres • Temporary: 0.2 acre Wetlands • Permanent: 0.3 acre • Temporary: 0.6 acre	**Southern Alignment** Unvegetated Waters • Permanent: 0 acres • Temporary: 0 acres Wetlands • Permanent: 0.2 acre • Temporary: 0.8 acres	**Northern Alignment** Unvegetated Waters • Permanent: 0.2 acre • Temporary: 0 acres Wetlands • Permanent: 5.7 acres • Temporary: 1.4 acres **Existing SR-76 Upgrade*** Unvegetated Waters • Permanent: 0 acres • Temporary: 0 acres Wetlands • Permanent: 0.2 acre • Temporary: 0.5 acre	**Northern Alignment** Unvegetated Waters • Permanent: 0.1 acre • Temporary: 0 acres Wetlands • Permanent: 4.4 acres • Temporary: 1.3 acres **Existing SR-76 Upgrade*** Unvegetated Waters • Permanent: 0 acres • Temporary: 0 acres Wetlands • Permanent: 0.2 acre Temporary: 0.5 acre	No impacts.
6. California Department of Fish and Game Jurisdictional Waters, Including Wetlands	Acres – permanent and temporary impacts.	Permanent: 39.0 acres Temporary: 3.3 acres	Permanent: 32.5 acres Temporary: 10.2 acres	**Southern Alignment** • Permanent: 25.0 acres • Temporary: 3.1 acres **Existing SR-76 Upgrade*** • Permanent: 7.8 acres • Temporary: 3.6 acres	**Southern Alignment** • Permanent: 14.7 acres • Temporary: 4.2 acres	**Northern Alignment** • Permanent: 20.8 acres • Temporary: 2.0 acres **Existing SR-76 Upgrade*** • Permanent: 6.0 acres • Temporary: 2.5 acres	**Northern Alignment** • Permanent: 18.2 acres • Temporary: 2.0 acres **Existing SR-76 Upgrade*** • Permanent: 6.2 acres • Temporary: 2.5 acres	No impacts.

Criteria	Measured Parameter	Alt. 1 – Existing Alignment 70-mph Design Speed	Alt. 2 – Proposed Existing Alignment Alternative (Preferred Alternative)	Alt. 3 – Southern Alignment North (old southern)	Alt. 4 – Proposed Southern Alignment Alternative South (new southern)	Alt. 5 – Northern Alignment without Tunnels	Alt. 6 – Northern Alignment with Tunnels	No Build
7. Water Quality	Opportunities for storm water treatment.	• High • Bioswales and detention basins would be used to treat a higher amount of roadway storm water runoff.	• High • Bioswales and detention basins would be used to treat a higher amount of roadway storm water runoff.	• High • Bioswales and detention basins would be used to treat a higher amount of roadway storm water runoff.	• High • Bioswales and detention basins would be used to treat a lower amount of roadway storm water runoff.	• Moderate • Bioswales and detention basins would be used to treat a lower amount of roadway storm water runoff. • Bioswales would have limited use due to steeper grades between Gird Road and Old Highway 395.	• High • Bioswales and detention basins would be used to treat roadway storm water runoff. • Tunnel reduces area of roadway exposed to storm water.	• Existing SR-76 does not include storm water treatment features.
8. Federally Threatened (FT) and Federally Endangered (FE) Species and Habitat Types	Number of species directly and indirectly impacted, acres of permanent and temporary impacts to disturbed nondisturbed sensitive habitat types, and numbers of individuals impacted, where known.	• FT Coastal California Gnatcatcher Permanent: 0.9 acre Temporary: 2.4 acres • FE Least Bell's Vireo Permanent: 54.0 acres Temporary: 5.2 acres • FE Southwestern Willow Flycatcher Permanent: 53.4 acres Temporary: 5.1 acres • FE Arroyo Toad (breeding) Permanent: 54.9 acres Temporary: 5.2 acres • FE Arroyo Toad (aestivation) Permanent: 36.7 acres Temporary: 7.9 acres	Five Federally Listed Species Impacted Total • San Diego Ambrosia Permanent: <0.01 acre Temporary: 0 acres Indirect: 0 acres 324,529 • FT Coastal California Gnatcatcher Permanent: 2 indiv Temporary: 0 indiv Indirect: 2 indiv • FE Least Bell's Vireo Permanent: 6 indiv Temporary: 0 indiv Indirect: 11 indiv • FE Southwestern Willow Flycatcher Permanent: 0 indiv Temporary: 0 indiv Indirect: 4 indiv • FE Arroyo Toad Permanent: 4 indiv Temporary: 2 indiv Indirect: 8 indiv	**Southern Alignment** • FT Coastal California Gnatcatcher Permanent: 0.8 acre Temporary: 2.3 acres • FE Least Bell's Vireo Permanent: 43.4 acres Temporary: 5.0 acres • FE Southwestern Willow Flycatcher Permanent: 34.2 acres Temporary: 3.9 acres • FE Arroyo Toad (breeding) Permanent: 70.1 acres Temporary: 8.1 acres • FE Arroyo Toad (aestivation) Permanent: 16.6 acres Temporary: 6.3 acres **Existing SR-76 Upgrade*** • FT Coastal California Gnatcatcher Permanent: 0.1 acre Temporary: 0.3 acre • FE Least Bell's Vireo Permanent: 8.7 acres Temporary: 4.6 acres • FE Southwestern Willow Flycatcher Permanent: 7.3 acres Temporary: 4.6 acres • FE Arroyo Toad (breeding) Permanent: 8.7 acres Temporary: 5.1 acres • FE Arroyo Toad (aestivation) Permanent: 7.8 acres Temporary: 4.5 acres	Five Federally Listed Species Impacted Total **Southern Alignment** • San Diego Ambrosia Permanent: 0 acres Temporary: 0 acres Indirect: 0 acres • FT Coastal California Gnatcatcher Permanent: 0 indiv Temporary: 0 indiv Indirect: 2 indiv • FE Least Bell's Vireo Permanent: 2 indiv Temporary: 0 indiv Indirect: 1 indiv • FE Southwestern Willow Flycatcher Permanent: 0 indiv Temporary: 0 indiv Indirect: 1 indiv • FE Arroyo Toad Permanent: 0 indiv Temporary: 0 indiv Indirect: 1 indiv **Existing SR-76 Upgrade*** • FT Coastal California Gnatcatcher Permanent: 0 indiv Temporary: 0 indiv • FE Least Bell's Vireo Permanent: 3 indiv Temporary: 0 indiv • FE Southwestern Willow Flycatcher Permanent: 0 indiv Temporary: 0 indiv • FE Arroyo Toad Permanent: 0 indiv Temporary: 0 indiv	**Northern Alignment** • FT Coastal California Gnatcatcher Permanent: 17.5 acres Temporary: 4.0 acres • FE Least Bell's Vireo Permanent: 30.1 acres Temporary: 3.6 acres • FE Southwestern Willow Flycatcher Permanent: 28.7 acres Temporary: 3.4 acres • FE Arroyo Toad (breeding) Permanent: 27.9 acres Temporary: 3.6 acres • FE Arroyo Toad (aestivation) Permanent: 72.6 acres Temporary: 12.6 acres **Existing SR-76 Upgrade*** • FT Coastal California Gnatcatcher Permanent: 0 acres Temporary: 0.2 acre • FE Least Bell's Vireo Permanent: 7.1 acres Temporary: 3.5 acres • FE Southwestern Willow Flycatcher Permanent: 5.7 acres Temporary: 3.4 acres • FE Arroyo Toad (breeding) Permanent: 7.1 acres Temporary: 4.0 acres • FE Arroyo Toad (aestivation) Permanent: 4.7 acres Temporary: 2.7 acres	**Northern Alignment** • FT Coastal California Gnatcatcher Permanent: 5.0 acres Temporary: 2.8 acres • FE Least Bell's Vireo Permanent: 24.0 acres Temporary: 3.4 acres • FE Southwestern Willow Flycatcher Permanent: 22.9 acres Temporary: 3.2 acres • FE Arroyo Toad (breeding) Permanent: 24.0 acres Temporary: 3.4 acres • FE Arroyo Toad (aestivation) Permanent: 20.9 acres Temporary: 7.4 acres **Existing SR-76 Upgrade*** • FT Coastal California Gnatcatcher Permanent: 0 acres Temporary: 0.2 acre • FE Least Bell's Vireo Permanent: 7.4 acres Temporary: 3.5 acres • FE Southwestern Willow Flycatcher Permanent: 6.0 acres Temporary: 3.5 acres • FE Arroyo Toad (breeding) Permanent: 7.4 acres Temporary: 4.0 acres • FE Arroyo Toad (aestivation) Permanent: 4.7 acres Temporary: 2.7 acres	No impacts.
9. State Threatened (ST) and State Endangered (SE) Species	Number of species directly and indirectly impacted, acres of permanent and temporary impacts to habitat, and numbers of individuals impacted, where known.	Two State Listed Species Impacted • SE Least Bell's Vireo • SE Southwestern Willow Flycatcher	Two State Listed Species Impacted • SE Least Bell's Vireo Permanent: 6 indiv Temporary: 0 indiv Indirect: 11 indiv • SE Southwestern Willow Flycatcher Permanent: 0 indiv Temporary: 0 indiv Indirect: 4 indiv	Two State Listed Species Impacted • SE Least Bell's Vireo • SE Southwestern Willow Flycatcher	Two State Listed Species Impacted • SE Least Bell's Vireo Permanent: 2 indiv Temporary: 0 indiv Indirect: 1 indiv • SE Southwestern Willow Flycatcher Permanent: 0 indiv Temporary: 0 indiv Indirect: 1 indiv **Existing SR-76 Upgrade*** • SE Least Bell's Vireo Permanent: 3 indiv Temporary: 0 indiv	Two State Listed Species Impacted • SE Least Bell's Vireo • SE Southwestern Willow Flycatcher	Two State Listed Species Impacted • SE Least Bell's Vireo • SE Southwestern Willow Flycatcher	No impacts.

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					• SE Southwestern Willow Flycatcher Permanent: 0 indiv Temporary: 0 indiv			
10. U.S. Fish and Wildlife Service Designated Critical Habitat	Acres of critical habitat impacted (by species). *Primary constituent elements were not evaluated, and impacts to critical habitat containing the primary constituent elements may be less than the number presented.*	Southwestern Willow Flycatcher Permanent: 59.1 acres Temporary: 5.3 acres Least Bell's Vireo Permanent: 94.3 acres Temporary: 21.4 acres Coastal California Gnatcatcher Permanent: 64.4 acres Temporary: 32.3 acres	Southwestern Willow Flycatcher Permanent: 37.1 acres Temporary: 10.9 acres Least Bell's Vireo Permanent: 63.2 acres Temporary: 32.6 acres Coastal California Gnatcatcher Permanent: 41.8 acres Temporary: 30.2 acres San Diego Ambrosia Permanent: 1.5 acres Temporary: 0.6 acres Arroyo Toad Permanent: 78.0 acres Temporary: 64.3 acres	**Southern Alignment** Southwestern Willow Flycatcher Permanent: 50.9 acres Temporary: 6.2 acres Least Bell's Vireo Permanent: 93.9 acres Temporary: 23.8 acres Coastal California Gnatcatcher Permanent: 47.6 acres Temporary: 30.8 acres **Existing SR-76 Upgrade*** Southwestern Willow Flycatcher Permanent: 10.3 acres Temporary: 4.7 acres Least Bell's Vireo Permanent: 27.9 acres Temporary: 7.94 acres Coastal California Gnatcatcher Permanent: 12.6 acres Temporary: 4.4 acres	**Southern Alignment** Southwestern Willow Flycatcher Permanent: 16.4 acres Temporary: 6.0 acres Least Bell's Vireo Permanent: 33.9 acres Temporary: 40.9 acres Coastal California Gnatcatcher Permanent: 52.9 acres Temporary: 36.2 acres San Diego Ambrosia Permanent: 0 acres Temporary: 0 acres Arroyo Toad Permanent: 90.4 acres Temporary: 64.1 acres **Existing SR-76 Upgrade*** Southwestern Willow Flycatcher Permanent: 9.0 acres Temporary: 4.1 acres Least Bell's Vireo Permanent: 23.7 acres Temporary: 6.1 acres Coastal California Gnatcatcher Permanent: 12.6 acres Temporary: 4.3 acres San Diego Ambrosia Permanent: 0 acres Temporary: 0 acres Arroyo Toad Permanent: 34.9 acres Temporary: 11.1 acres	**Northern Alignment** Southwestern Willow Flycatcher Permanent: 29.9 acres Temporary: 4.0 acres Least Bell's Vireo Permanent: 45.4 acres Temporary: 19.0 acres Coastal California Gnatcatcher Permanent: 119.5 acres Temporary: 38.4 acres **Existing SR-76 Upgrade*** Southwestern Willow Flycatcher Permanent: 6.2 acres Temporary: 2.8 acres Least Bell's Vireo Permanent: 16.7 acres Temporary: 4.8 acres Coastal California Gnatcatcher Permanent: 7.5 acres Temporary: 2.7 acres	**Northern Alignment** Southwestern Willow Flycatcher Permanent: 26.1 acres Temporary: 3.8 acres Least Bell's Vireo Permanent: 37.8 acres Temporary: 18.4 acres Coastal California Gnatcatcher Permanent: 39.5 acres Temporary: 30.8 acres **Existing SR-76 Upgrade*** Southwestern Willow Flycatcher Permanent: 6.2 acres Temporary: 2.8 acres Least Bell's Vireo Permanent: 16.7 acres Temporary: 4.8 acres Coastal California Gnatcatcher Permanent: 7.5 acres Temporary: 2.7 acres	No impacts.
11. Wildlife Corridors	Number and functionality/ connections of existing wildlife corridors impacted. *Redesign of drainage features based on July 2009 alignments may result in slight changes to wildlife crossings provided.*	• One corridor impacted: San Luis Rey River corridor and associated wetlands impacted for 5.6 miles (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	• One corridor impacted: San Luis Rey River corridor and associated wetlands impacted for 5.6 miles (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	• One corridor impacted: San Luis Rey River corridor and associated wetlands impacted for 5.6 miles (alignment crosses river twice and affects linkage of the east/west movement corridor).	• One corridor impacted in multiple locations. • San Luis Rey River corridor and associated wetlands impacted for 5.6 miles (alignment crosses river twice and affects linkage of the east/west movement corridor).	• One corridor impacted: San Luis Rey River corridor and associated wetlands impacted for 4.7 miles (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	• One corridor impacted: San Luis Rey River corridor and associated wetlands impacted for 4.60 miles (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	No impacts.
12. Creation of Wildlife Crossings	Number of new wildlife crossings created through project design.	Were not determined.	3 large underpasses (≥10feet X10 feet), 5 medium underpasses (~ 5 feet X5 feet), 8 small underpasses (≥3 feet in diameter). 6 of the medium and large crossings would have openness ratio of 0.1, where 0.1= culvert width X culvert height/culvert length. (See Project Features Maps at end of Chapter 2.)	Were not determined.	4 large underpasses (≥10 feet X 10 feet), 6 medium underpasses (~5 feetX 5 feet), 12 small underpasses (≥ 3 feet diameter), 6 of the medium and large crossings would have an openness ratio of 0.1, where 0.l1 = culvert width X culvert height/culvert length. (See Project Features Maps at end of Chapter 2.)	Were not determined.	Were not determined.	No new corridors.
13. Impacts to Draft North County Multiple Species Conservation Plan (MSCP) Study Area/North County Draft MSCP Preserve Boundaries	Acres of impacts and habitat inside MSCP Study Area and within MSCP Pre-Approved Mitigation Area (PAMA), and within MSCP and not within PAMA; fragmentation and	• 159.7 acres inside MSCP Study Area and within PAMA • 18.4 acres inside MSCP Study Area but not in PAMA • 25.5 miles of Preserve edge	• 171.3 acres inside MSCP Study Area and within PAMA • 14.6 acres inside MSCP Study Area but not in PAMA • 12.9 miles of Preserve edge	**Southern Alignment** • 160.3 acres inside MSCP Study Area and within PAMA • 1.3 acres inside MSCP Study Area but not in PAMA	• 192.1 acres inside MSCP Study Area and within PAMA • 1.1 acres inside MSCP Study Area but not in PAMA • 13.7 miles of Preserve edge	**Northern Alignment** • 194.3 acres inside MSCP Study Area and within PAMA • 57.8 acres inside MSCP Study Area but not in PAMA	**Northern Alignment** • 107.1 acres inside MSCP Study Area and within PAMA • 29.4 acres inside MSCP Study Area but not in PAMA	No impacts.

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	"edge" effects to preserved areas.	• 8 distinct Preserve patches	• 4 distinct Preserve patches	**Existing SR-76 Upgrade*** • 41.5 acres inside MSCP Study Area and within PAMA • 11.2 acres inside MSCP Study Area but not in PAMA Combined • 31.0 miles of Preserve edge • 10 distinct Preserve patches	• 4 distinct Preserve patches	**Existing SR-76 Upgrade*** • 24.9 acres inside MSCP Study Area and within PAMA • 6.7 acres inside MSCP Study Area but not in PAMA Combined • 25.8 miles of Preserve edge • 18 distinct Preserve patches	**Existing SR-76 Upgrade*** • 24.9 acres inside MSCP Study Area and within PAMA • 6.7 acres inside MSCP Study Area but not in PAMA Combined • 26.0 miles of Preserve edge • 16 distinct Preserve patches	
14. Impacts to MSCP Wildlife Movement Linkages	Number of linkages impacted. *Parameter has been modified; calculating acreages would be difficult and inaccurate, as updated MSCP GIS layers are in draft form and not available to the public at this time.*	One linkage impacted: Lower San Luis Rey Linkage (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	One linkage impacted: Lower San Luis Rey Linkage (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	One linkage impacted: Lower San Luis Rey Linkage (alignment crosses river twice and affects linkage of the east/west movement corridor).	One linkage impacted: Lower San Luis Rey Linkage (alignment crosses river twice and affects linkage of the east/west movement corridor).	One linkage impacted: Lower San Luis Rey Linkage (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	One linkage impacted: Lower San Luis Rey Linkage (alignment parallels and impacts north side of river only; minimizes impact to east/west movement corridor).	No impacts.
15. Impacts to Existing Mitigation/Restoration Sites	Acres of impacts. *All impacted areas of the revegetation area within the San Diego County mitigation parcel fall within the "middle overlap" area that was not included in the latest round of calculations.*	Morrison Mitigation Area: • Permanent: 0.9 acre • Temporary: 0.2 acre County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 6.2 acres • Temporary: 0.5 acre Indirect Impacts: TBD.	Morrison Mitigation Area: • Permanent: 1.4 acres • Temporary: 1.3 acres County Mitigation Parcel - Revegetation Area: • Permanent: 0.7 acre • Temporary: 0.5 acre Outside Revegetation Area: • Permanent: 4.5 acres • Temporary: 1.2 acres Indirect Impacts: TBD.	**Southern Alignment** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres **Existing SR-76 Upgrade*** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 0 acres • Temporary: 0.2 acre Indirect Impacts TBD	**Southern Alignment** Morrison Mitigation Area: • Permanent: 1.4 acres • Temporary: 2.4 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0.1 acre Outside Revegetation Area: • Permanent: 1.9 acres • Temporary: 1.5 acres **Existing SR-76 Upgrade*** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 0 acres • Temporary: 0.2 acre Indirect Impacts TBD	**Northern Alignment** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 6.2 acres • Temporary: 0.7 acre **Existing SR-76 Upgrade*** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 0 acres • Temporary: 0.1 acre Indirect Impacts TBD	**Northern Alignment** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 5.7 acres • Temporary: 0.8 acre **Existing SR-76 Upgrade*** Morrison Mitigation Area: • Permanent: 0 acres • Temporary: 0 acres County Mitigation Parcel – Revegetation Area: • Permanent: 0 acres • Temporary: 0 acres Outside Revegetation Area: • Permanent: 0 acres • Temporary: 0.1 acre Indirect Impacts TBD	No impacts.
16. Economic Impacts to the Local Area	Costs/duration of delays.	• Minor. • Decreased patronage of businesses during construction. • On-site relocation of personal property for two businesses. • Altered access for one business.	• Minor • Decreased patronage of businesses during construction. • On-site relocation of personal property for two businesses. • Altered access for one business.	• Minor • Decreased patronage of businesses near South Mission Road only during portions of construction. • On-site relocation of personal property for two businesses. • Altered access for one business.	• High • Decreased patronage of businesses, near South Mission Road only, during portions of construction. • On-site relocation of personal property for two businesses. • Altered access for one business. • Displacement of Vessels Stallion Farm, which would affect surrounding businesses that work with the Vessels Stallion Farm.	• High • Decreased patronage of businesses, near South Mission Road only, during portions of construction. • Altered access for one business and potentially other businesses north of the eastern segment of the proposed project. • Displacement or reconfiguration of the Golf Club of California golf course.	• High • Decreased patronage of businesses, near South Mission Road only, during portions of construction. • Altered access for one business and potentially other businesses north of the eastern segment of the proposed project. • Displacement or reconfiguration of the Golf Club of California golf course.	No impacts.
17. Impacts Related to Environmental Justice (Executive Order 12898)	Yes/No – Disproportionate impacts to minority and low-income populations within the community.	No. Field reconnaissance confirmed conclusions from census research that no minority populations would be adversely affected by the proposed project.	• No. Field reconnaissance confirmed conclusions from census research that no minority populations would be adversely affected by the proposed project.	• No. Field reconnaissance confirmed conclusions from census research that no minority populations would be adversely affected by the proposed project.	• No. Field reconnaissance confirmed conclusions from census research that no minority populations would be adversely affected by the proposed project.	• No. Field reconnaissance confirmed conclusions from census research that no minority populations would be adversely affected by the proposed project.	• No. Field reconnaissance confirmed conclusions from census research that no minority populations would be adversely affected by the proposed project.	No impacts.

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18. Community Impacts	Potential for adverse social impacts (yes or no); low, medium, or high impacts to community character and cohesion.	• No. • Low impacts to community character and cohesion; partial acquisition of one equestrian facility likely.	• No. • Low impacts to community character and cohesion, partial acquisition of one equestrian facility likely (Faubus Farms).	**Southern Alignment** • Yes. Would convert a large amount of undeveloped land to roadway uses and alter the visual landscape and community character and cohesion. • Would also relocate Vessels Stallion Farm and acquire part of another equestrian facility (Faubus Farms), affecting businesses representative of the community's rural character. • High overall impacts to community character and cohesion.	**Southern Alignment** • Yes. Would convert a large amount of undeveloped land to roadway uses and alter the visual landscape and community character and cohesion. • Would relocate Vessels Stallion Farm and acquire part of another equestrian facility (Faubus Farms), affecting businesses representative of the community's rural character. • High overall impacts to community character and cohesion.	• Yes. Would convert a large amount of undeveloped land and alter the visual landscape, possibly displacing the Golf Club of California golf course. • High overall impacts to community character and cohesion.	• Yes. Would convert a large amount of undeveloped land and alter the visual landscape; possibly displacing the Golf Club of California golf course. • High overall impacts to community character and cohesion.	No impacts.
	Adverse impacts to vehicular, commuter, bicycle, or pedestrian travel patterns or accessibility (yes or no; low, medium, or high).	• Yes. Possible restriction of left turns at unsignalized intersections and possible loss of direct access to the existing SR-76 roadway for one business and some residences; possible loss of parking at the Coldwell Banker office; Medium overall impacts to travel patterns and accessibility. • Temporary impacts to bicycle and pedestrian facilities along the existing alignment during construction activities. Long-term benefit through improved roadway facilities and safety features.	• Yes. Possible restriction of left turns at unsignalized intersections and possible loss of direct access to the existing SR-76 roadway for one business and some residences; medium overall impacts to travel patterns and accessibility. • Temporary impacts to bicycle and pedestrian facilities along the existing alignment during construction activities. Long-term benefit through improved roadway facilities and safety features.	• Yes. Possible loss of direct access to SR-76; low overall impacts to travel patterns and accessibility. • Temporary impacts to bicycle and pedestrian facilities along portions of the existing alignment during construction activities. Long-term benefit through improved roadway facilities and safety features.	• Yes. Possible loss of direct access to SR-76. Overall impacts to travel patterns and accessibility would likely be low. • Temporary impacts to bicycle and pedestrian facilities along portions of the existing alignment during construction activities. Long-term benefit through improved roadway facilities and safety features.	• Yes. Possible loss of direct access to SR-76. Overall impacts to travel patterns and accessibility would likely be low. • Temporary impacts to bicycle and pedestrian facilities along portions of the existing alignment during construction activities. Long-term benefit through improved roadway facilities and safety features.	• Yes. Possible loss of direct access to SR-76. Overall impacts to travel patterns and accessibility would likely be low. • Temporary impacts to bicycle and pedestrian facilities along portions of the existing alignment during construction activities. Long-term benefit through improved roadway facilities and safety features.	No impacts.
	Schools, recreation areas, churches, businesses, police and fire protection facilities, or other places of community importance directly or indirectly impacted (low, medium, or high).	• Low	• Low	• Low	• Low	• High; as many as three golf course fairways would be removed with this alignment.	• High; as many as three golf course fairways would be removed with this alignment.	No impacts.
	Degree of anticipated adverse impacts to highway/traffic or overall public safety (low, medium, or high).	• Low	• Low	• Low	• Low	• Low	• Low	
	Degree of anticipated adverse impacts to older adults; people with disabilities; non-drivers; and transit-dependent, minority, and ethnic groups (low, medium, or high).	• Low	• Low	• Low	• Low	• Low	• Low	No impacts.
19. Relocations	Number and type of residential units and businesses.	• Displacement of one owner-occupied 4-bedroom single-family residence. • No business displacement.	• No residential displacement • No business displacement	• No residential displacement • No business displacement	• No residential displacement • Displacement of a large equestrian facility, Vessels Stallion Farm	• No residential displacement • Displacement of the Golf Club of California golf course	• Displacement of two residential units. • Displacement of the Golf Club of California golf course.	No impacts.
20. New Right-of-Way	Acres acquired.	58.0 acres	22.5 acres	84.9 acres	To be determined	161.1 acres	55.8 acres	0 acres
21. Project Right-of-Way Costs, Including Acquisition and Utility Relocations	Total right-of-way cost.	$30,829,000	17,000,000.	$74,763,000	To be determined	$81,745,000	$36,153,000	$0
22. Overall Project Costs	All project costs.	$286,000,000	$201,000,000	$409,000,000	$322,000,000	$748,000,000	$610,000,000	$0
23. Cultural Resources	• Potential to adversely	No impacts.	No impacts.	No impacts.	No impacts.	No impacts.	No impacts.	No impacts to historic or

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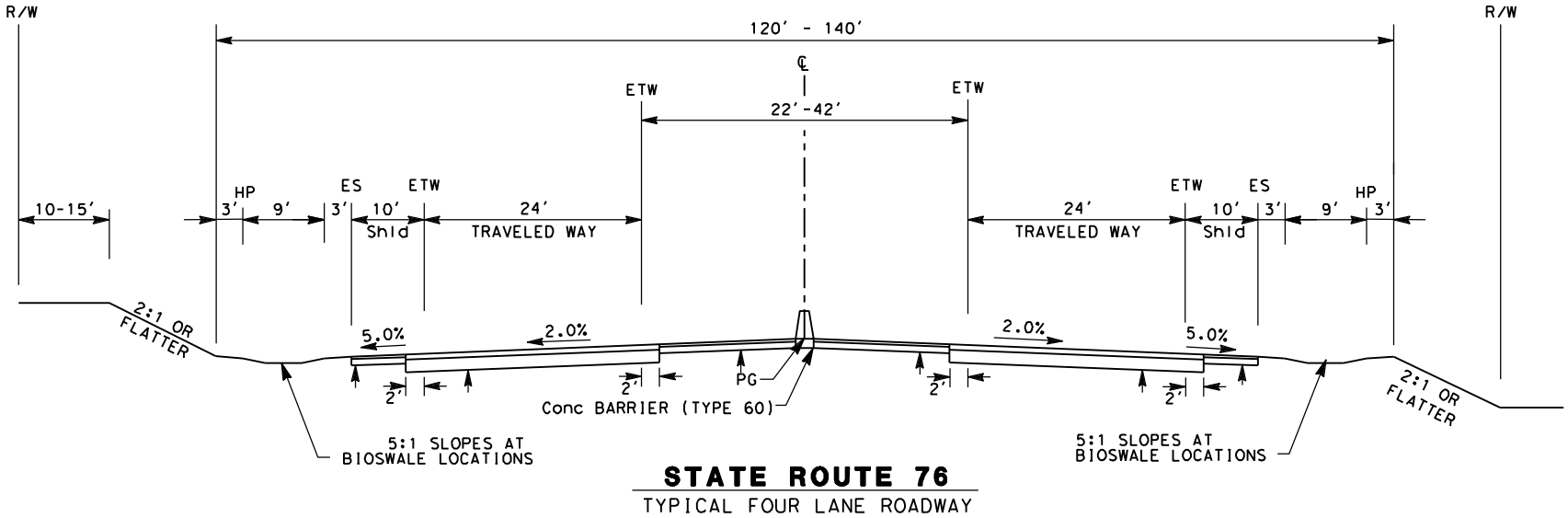
(Historic and Prehistoric)	impact cultural resources historic properties. • Sites potentially eligible for California Register of Historical Resources and the National Register of Historic Places known to exist (indirect impacts to setting and integrity). • Number of sites and severity of impacts to prehistoric resources.							prehistoric resources.
24. Noise	Number of receptor sites that exceed noise abatement criteria (NAC).	• Four residences • Two businesses	• Four residences • Two businesses	• One residence • Two businesses	• Four residences • One multi-family residence (12 units) • Two businesses	• Two residences • Could impact residences receptors near the Country Club of California golf course and rural residences • Two businesses • Could affect additional businesses north of the eastern segment of the proposed project	• Two residences • Could impact residences near the Country Club of California golf course and rural residences • Two businesses • Could affect additional businesses north of the eastern segment of the proposed project	No impacts.
25. Visual	Impact on public views of existing landscape, including the river valley/scenic resources (low, moderate, or high).	• Moderate impacts at several locations	• Low to Moderately High impacts at several locations	• Moderate impacts at several locations.	• Moderate to High impacts at several locations	• High impacts at several locations	• High impacts at several locations	No impacts.
26. Roadway Geometric Design Standards/ Exceptions	Number of design exceptions/type/ avoidance measures.	• Sight distance and super elevation design exceptions required at some intersections • Exception for 2:1 fill slopes to minimize wetlands impacts • Nonstandard shoulder width	• Six Mandatory Exceptions; Seven Advisory Exceptions • Mandatory includes superelevation, curvature, corner and stopping sight distance, shoulder width, cable railing	• Sight distance design exceptions for western river crossing. • Nonstandard shoulder width.	• Five Mandatory Exceptions; Seven Advisory Exceptions • Mandatory includes superelevation, curvature, corner and stopping sight distance, shoulder width	• Fill slopes 2:1 to minimize earthwork nonstandard • Profile grades of local roadways to intersect with elevated highway	• Fill slopes 2:1 to minimize earthwork nonstandard • Profile grades of local roadways to intersect with elevated highway	• No change, but sight distance, shoulder width, curve radius, slope, clear recovery zone, and superelevation would not meet design standards.
27. Section 4(f) Resources	Number of uses of 4(f) resources.	• Potential de minimis impacts to the San Luis Rey River Park	• Potential de minimis impacts to the San Luis Rey River Park.	• Potential de minimis impacts to the San Luis Rey River Park.	• Potential de minimis impacts to the San Luis Rey River Park.	• Potential de minimis impacts to the San Luis Rey River Park.	• *De minimis* impacts to the San Luis Rey River Park.	No impacts.
28. Hazardous Waste	Number of known sites and type of potential hazardous waste sites impacted.	• Five potential hazardous waste sites	• Five potential hazardous waste sites.	• Five potential hazardous waste sites.	• Five potential hazardous waste sites.	• Four potential hazardous waste sites.	• Four potential hazardous waste sites.	No impacts.
29. Air Quality	Short-term (construction) – Sensitive receptors near the proposed project. Long-term (during operations) – Number of hot spots and number of vehicle miles of travel (length of alternative alignment).	• No exceedances	• No exceedances	• No exceedances	• No exceedances	• No exceedances	• No exceedances	No impacts.

* Impacts discussed for "Existing SR-76 Upgrade" are indirect impacts resulting from future San Diego County project.

Table 2-3. Permits and Approvals Needed

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species	Biological Opinion received September 22, 2011
U.S. Army Corps of Engineers	Section 404 Permit for dredged and fill waters of the United States	Pending
California Department of Fish and Game	1602 Streambed Alteration Agreement	Pending
California Water Resources Control Board – Region 9	Section 401 Water Quality Certification	Pending
County of San Diego	New Freeway Agreement to facilitate new intersections and the reconfiguration of existing intersections	Pending
California Transportation Commission	Route Adoption (Southern Alignment Alternative Only)	Pending
FHWA	Modified Access Agreement	Received FHWA Finding of Acceptability Letter May 25, 2011

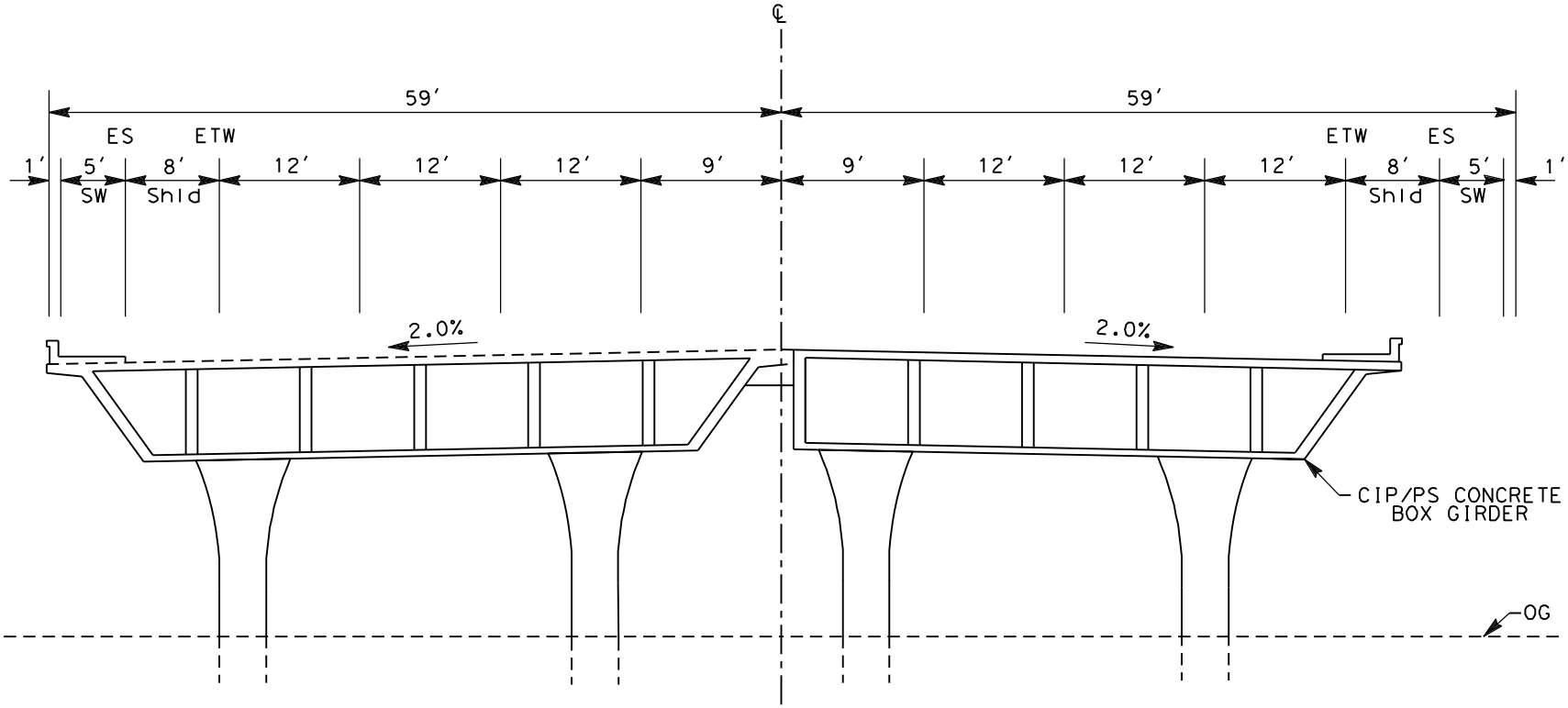


STATE ROUTE 76

TYPICAL FOUR LANE ROADWAY

HP	Hinge Point
ETW	Edge of Traveled Way
ES	Edge of Shoulder
R/W	Right of Way
Shld	Shoulder

Figure 2.1-1a
Typical Cross Section



STATE ROUTE 76

TYPICAL SIX LANE BRIDGE
OVER I-15

HP	Hinge Point
ETW	Edge of Traveled Way
ES	Edge of Shoulder
R/W	Right of Way
Shld	Shoulder

Figure 2.1-1b
Proposed Bridge Typical Cross Section

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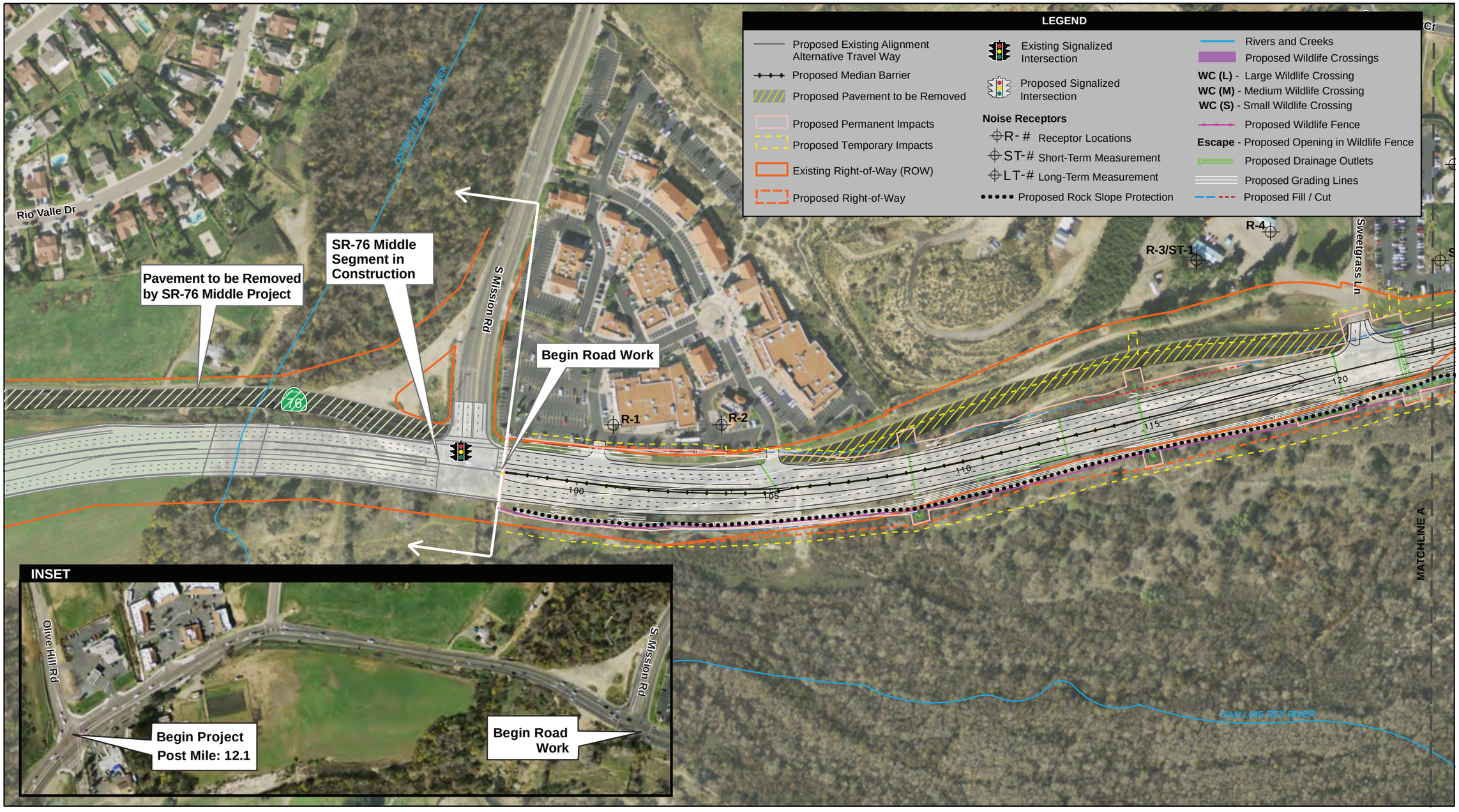
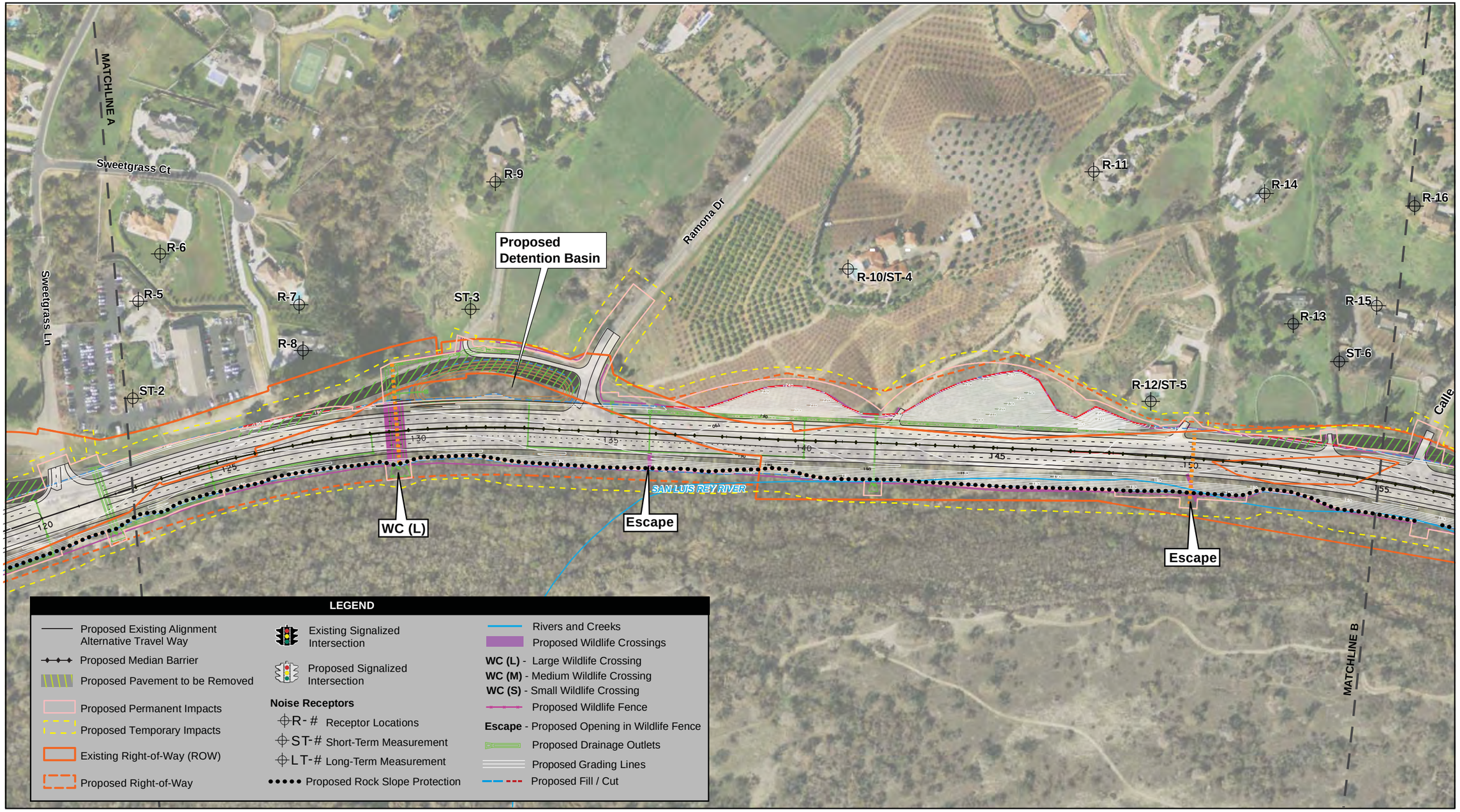


250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

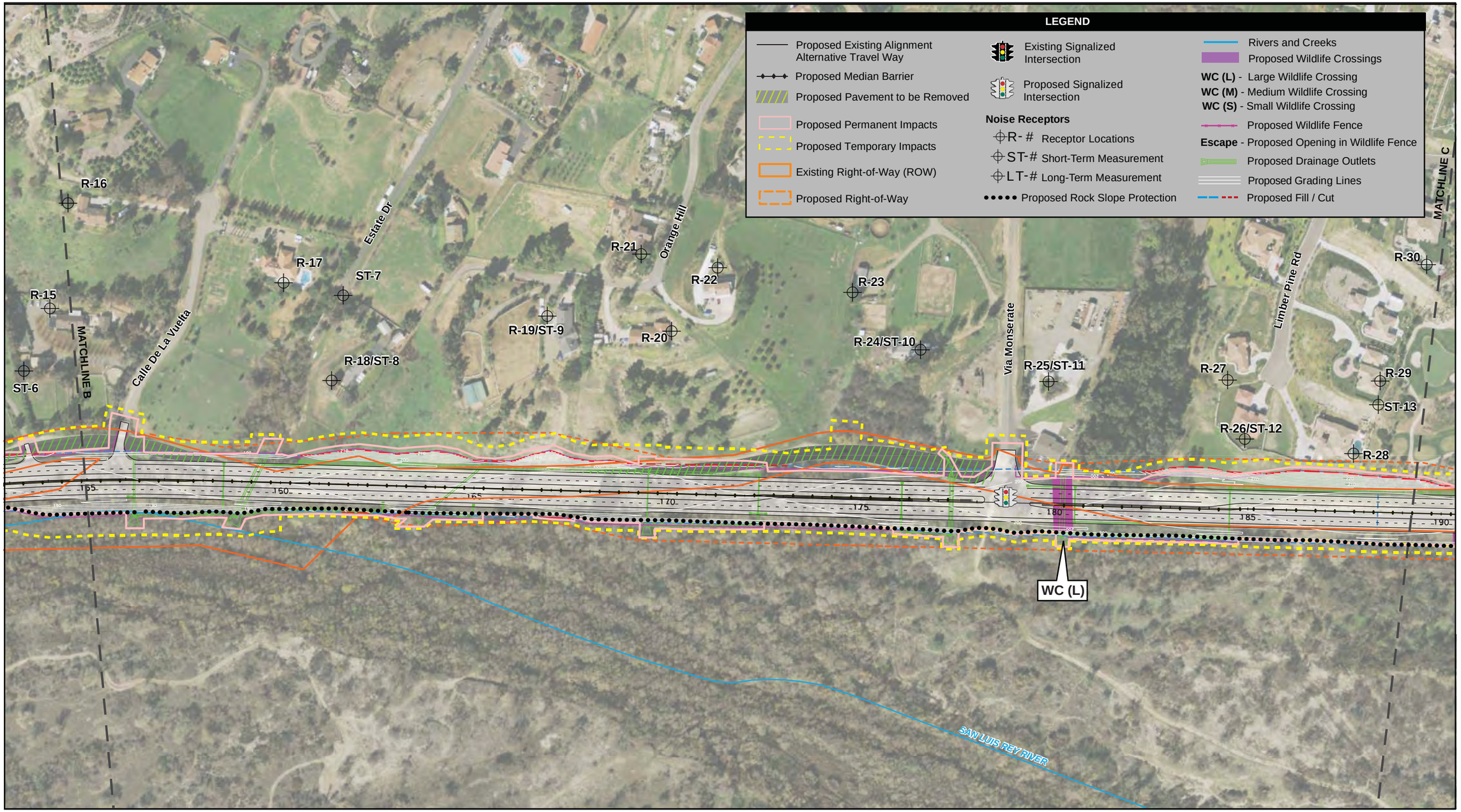
Figure 2.1-2a
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

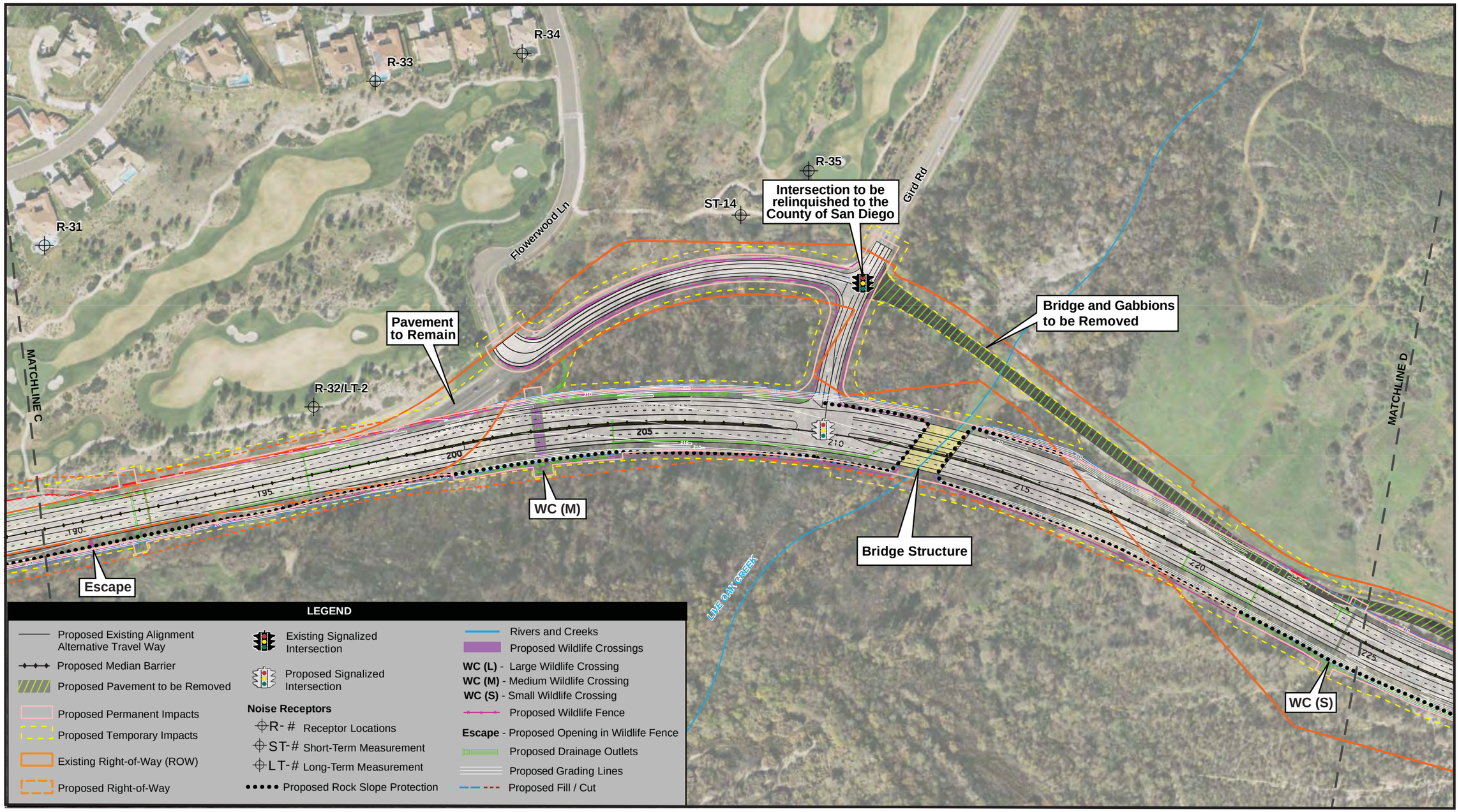
Figure 2.1-2b
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-2c
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



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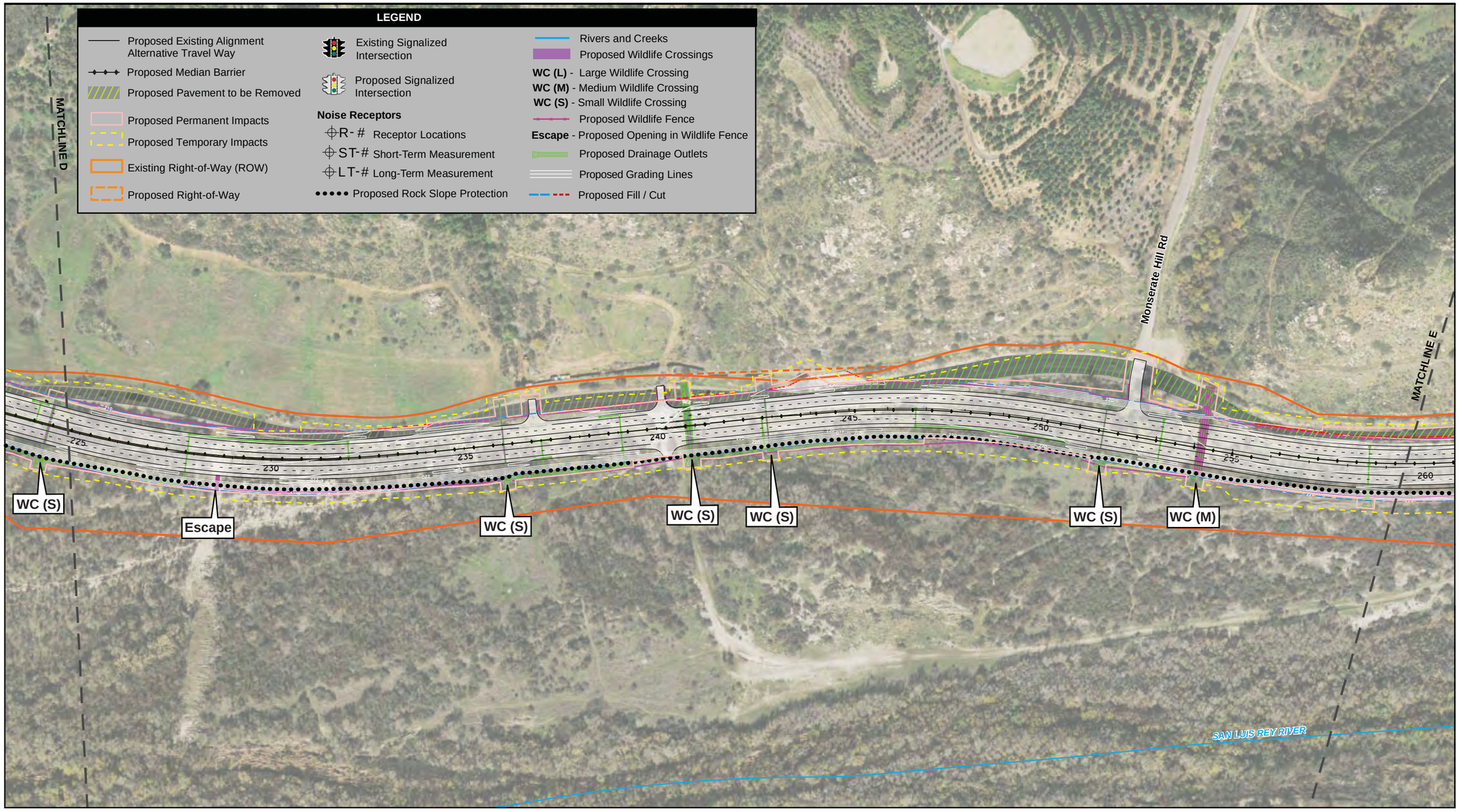
Scale: 1 = 3,000; 1 inch = 250 feet

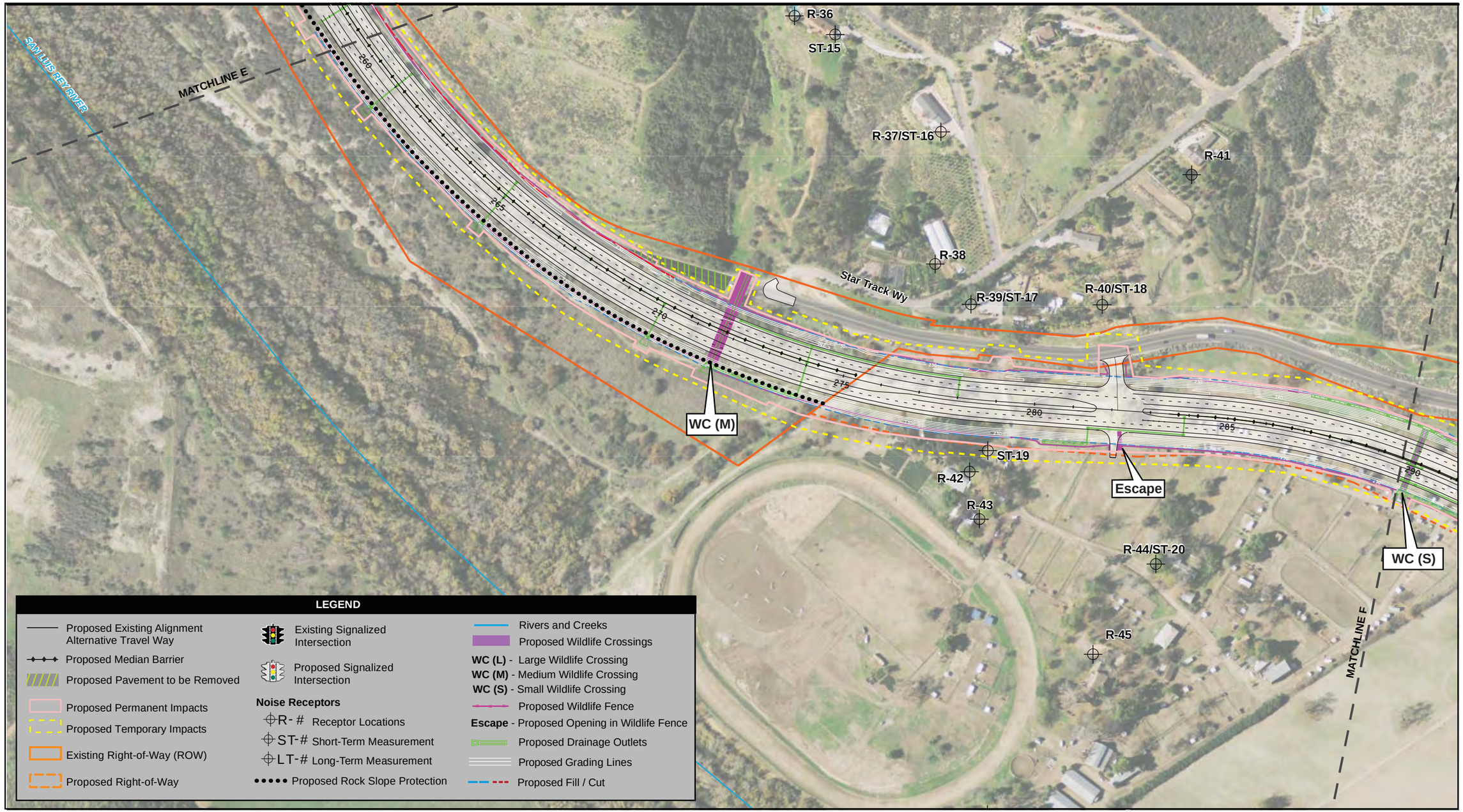
Figure 2.1-2d
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

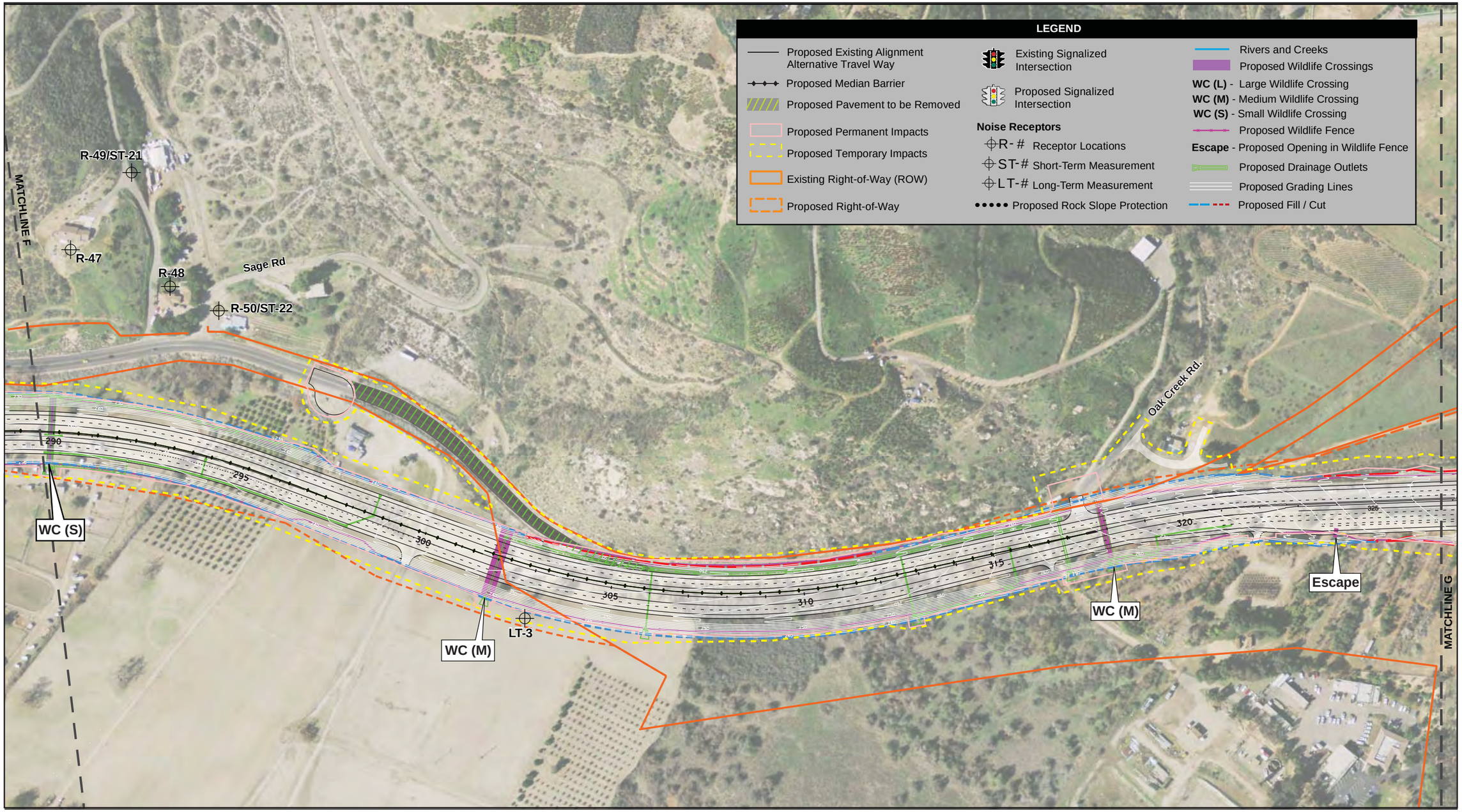
Figure 2.1-2e
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

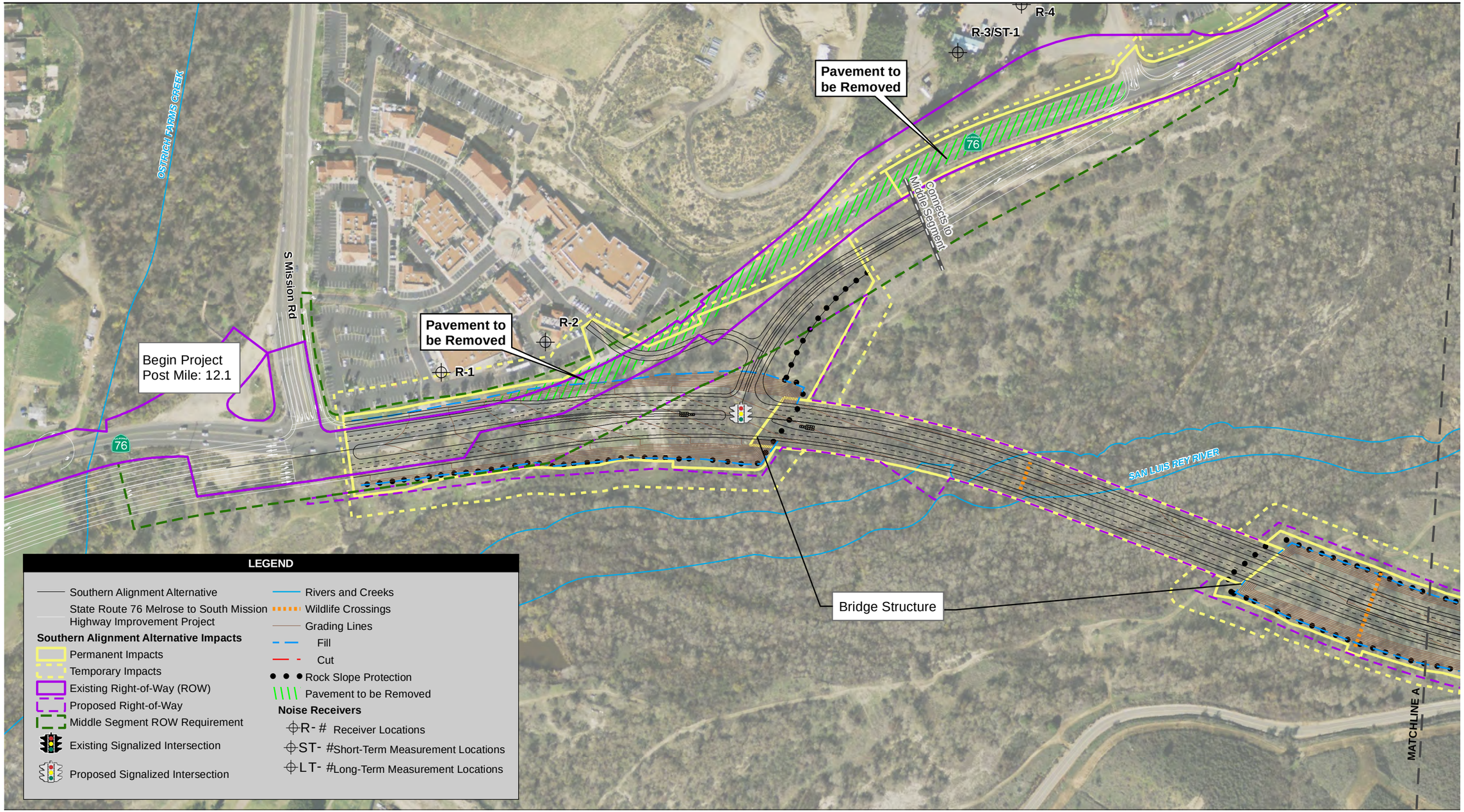
Figure 2.1- 2f
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-2g
Project Features Map,
Proposed Existing Alignment Alternative (Preferred)



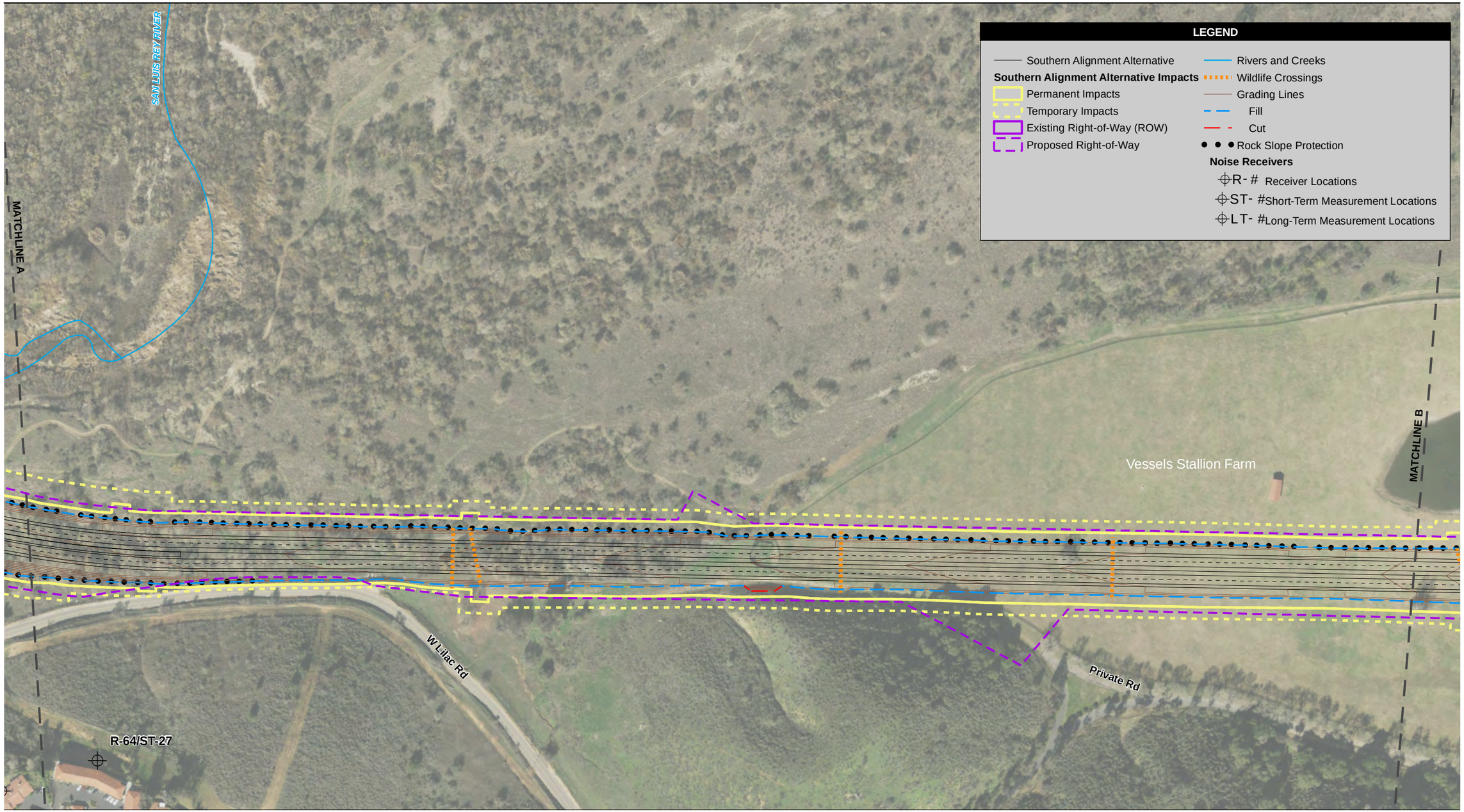
Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-3a
Project Features Map,
Proposed Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\June 2010\fig 2_01_3_Southern.mxd, 08/04/10, augellop



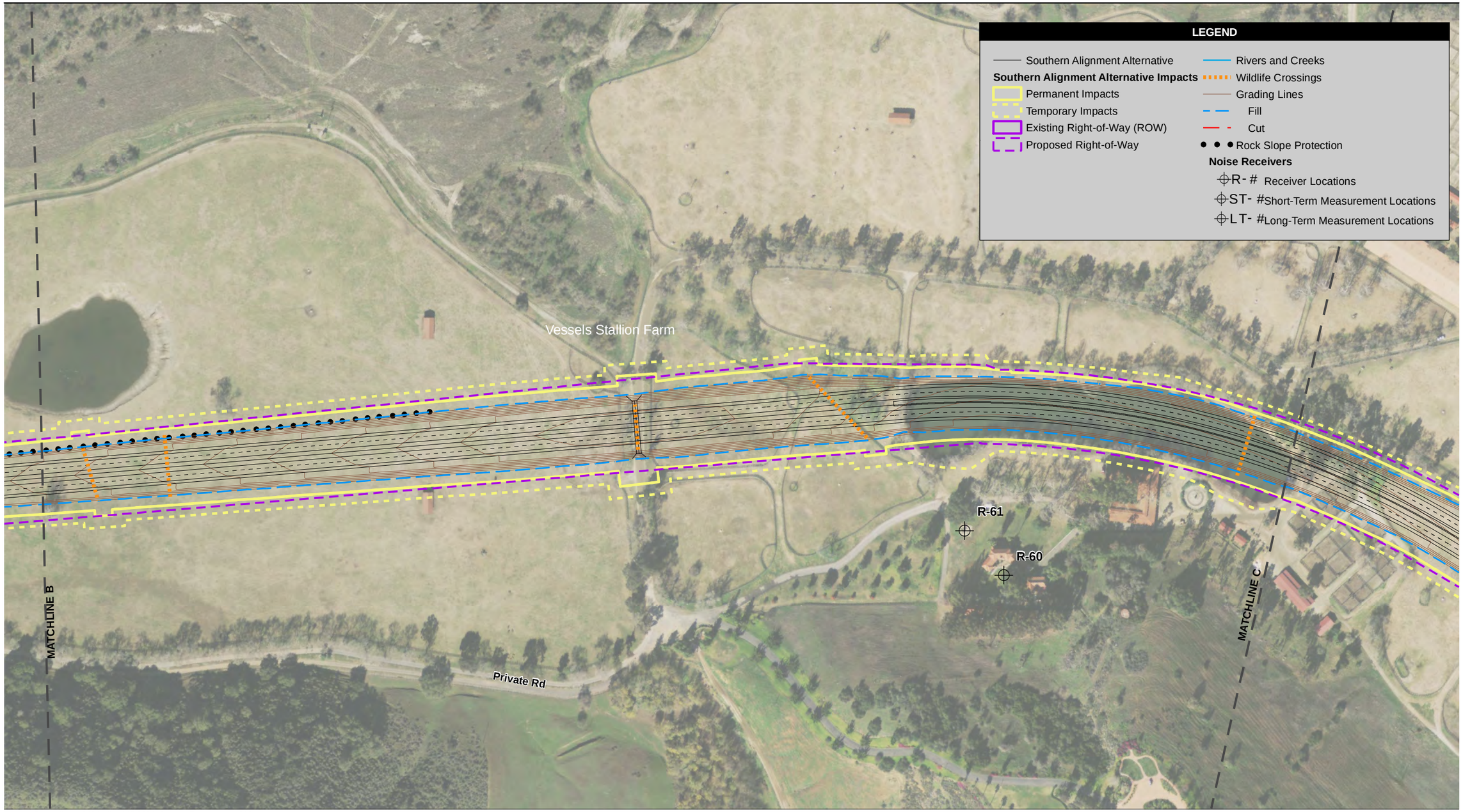
Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-3b
Project Features Map,
Proposed Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\May 2010\fig 2_01_3_Southern.mxd, 05/20/10, AugelloP



Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

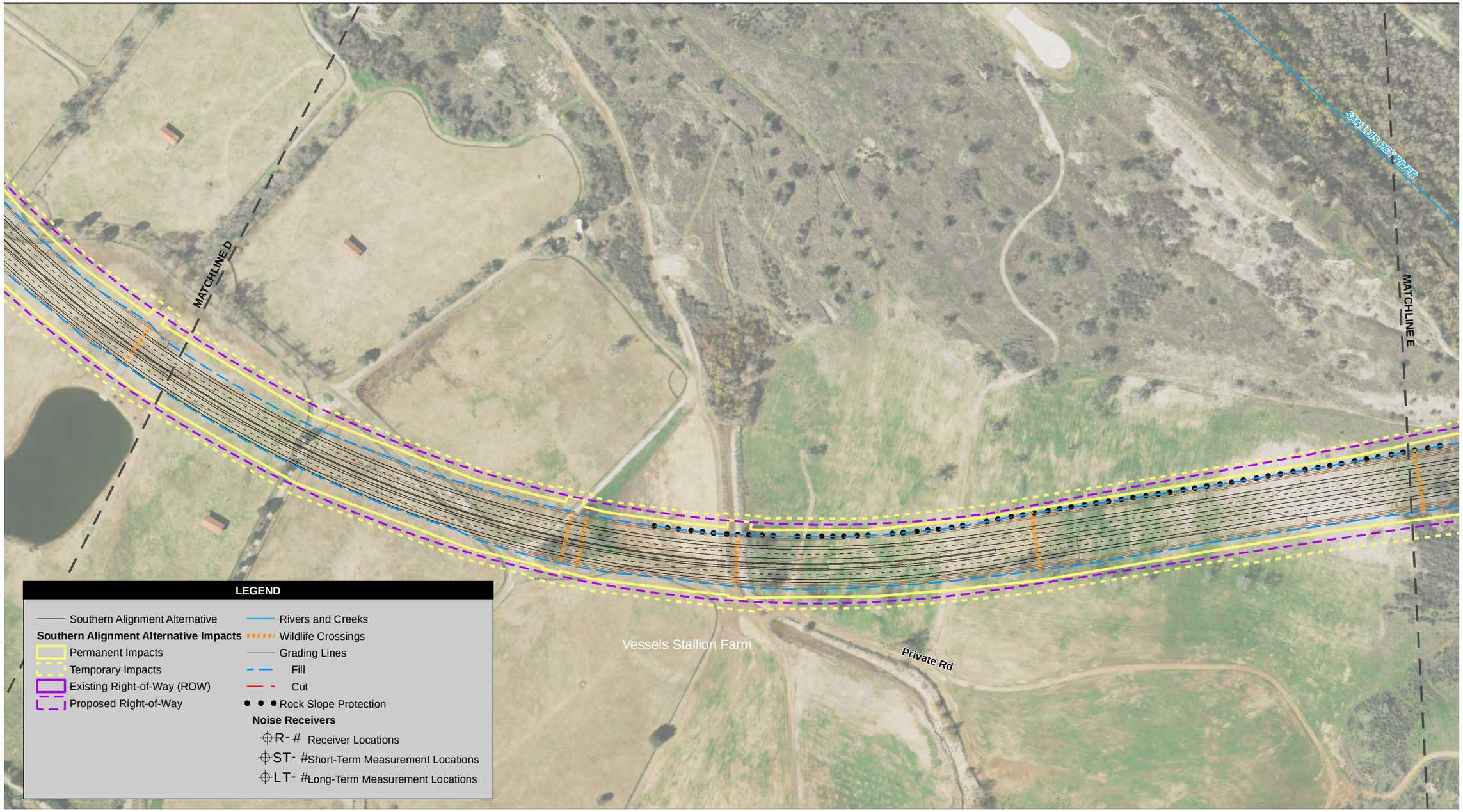
Figure 2.1-3c
Project Features Map,
Proposed Southern Alignment Alternative

Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-3d
Project Features Map,
Proposed Southern Alignment Alternative



Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-3e
Project Features Map,
Proposed Southern Alignment Alternative

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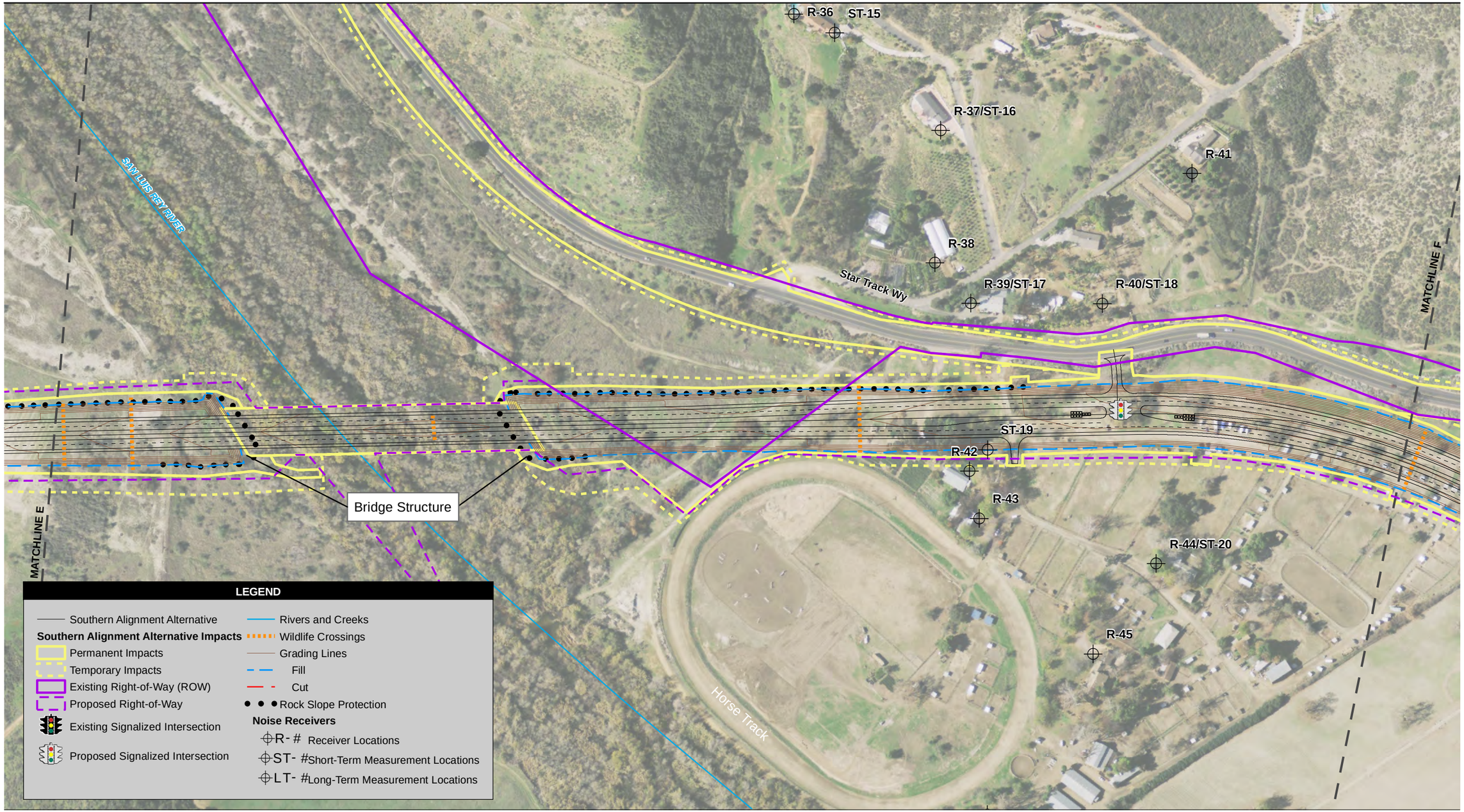

Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

250 125 0 250 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1- 3f
Project Features Map,
Proposed Southern Alignment Alternative

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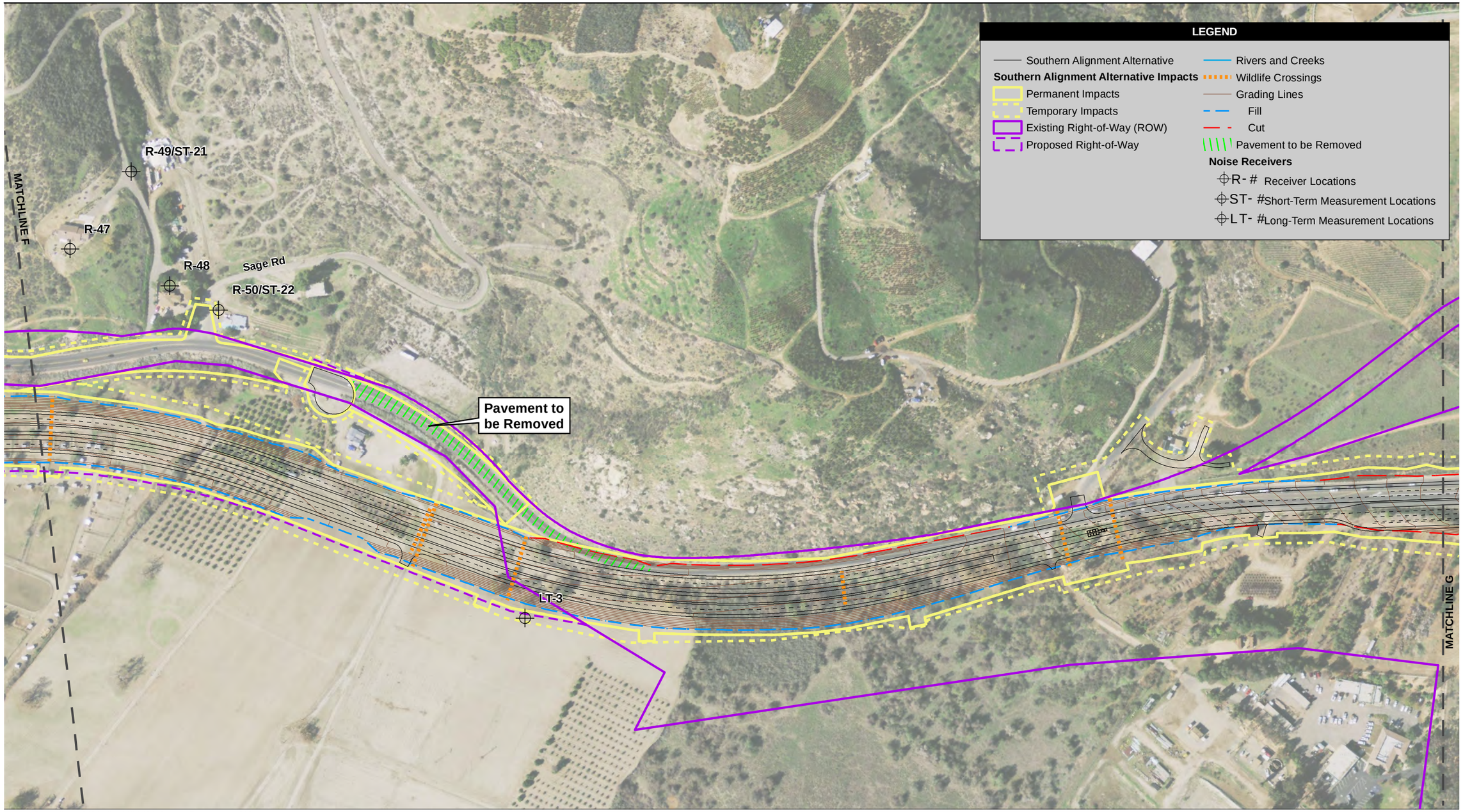

Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

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Scale: 1 = 3,000; 1 inch = 250 feet

Figure 2.1-3g
Project Features Map,
Proposed Southern Alignment Alternative

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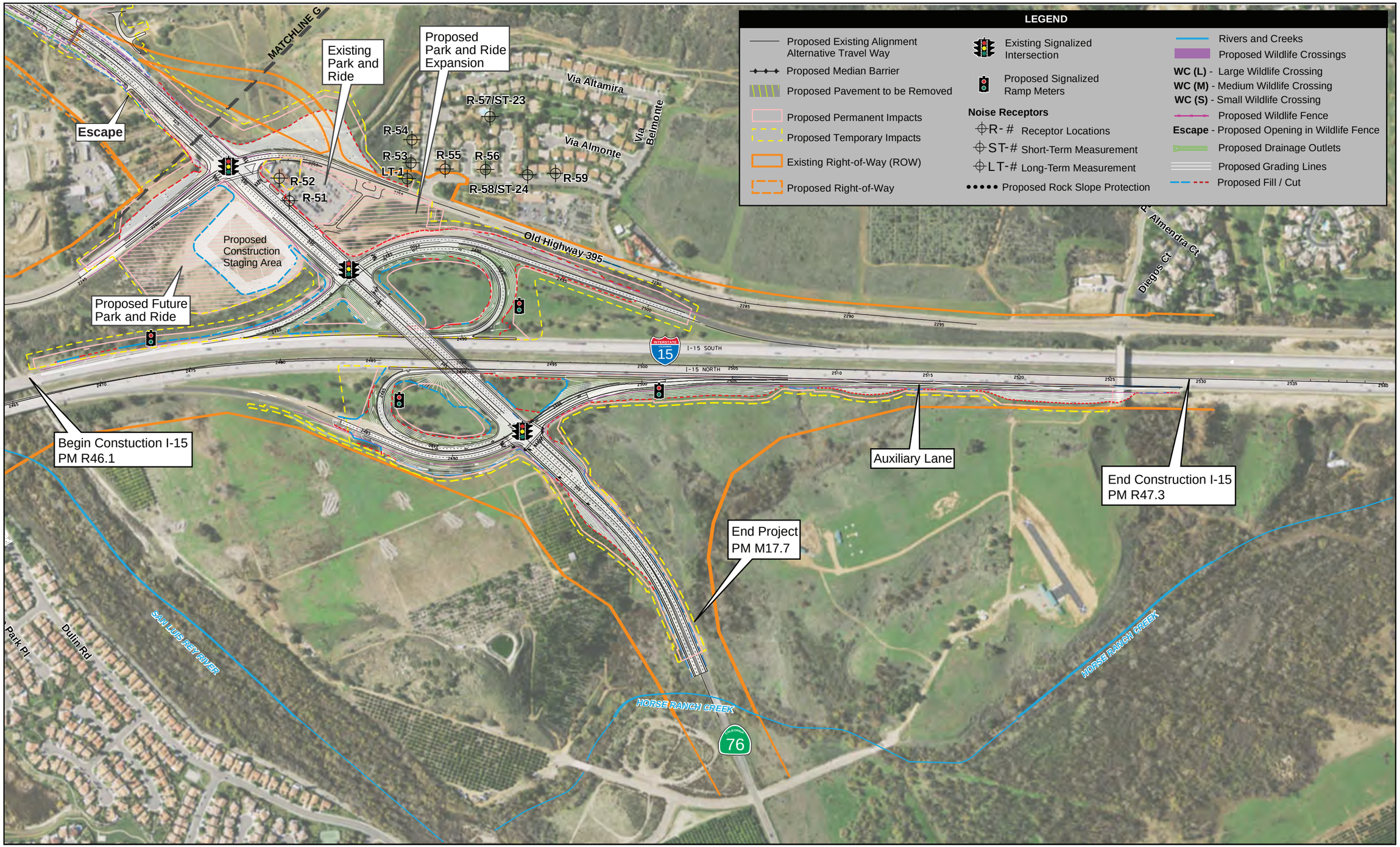
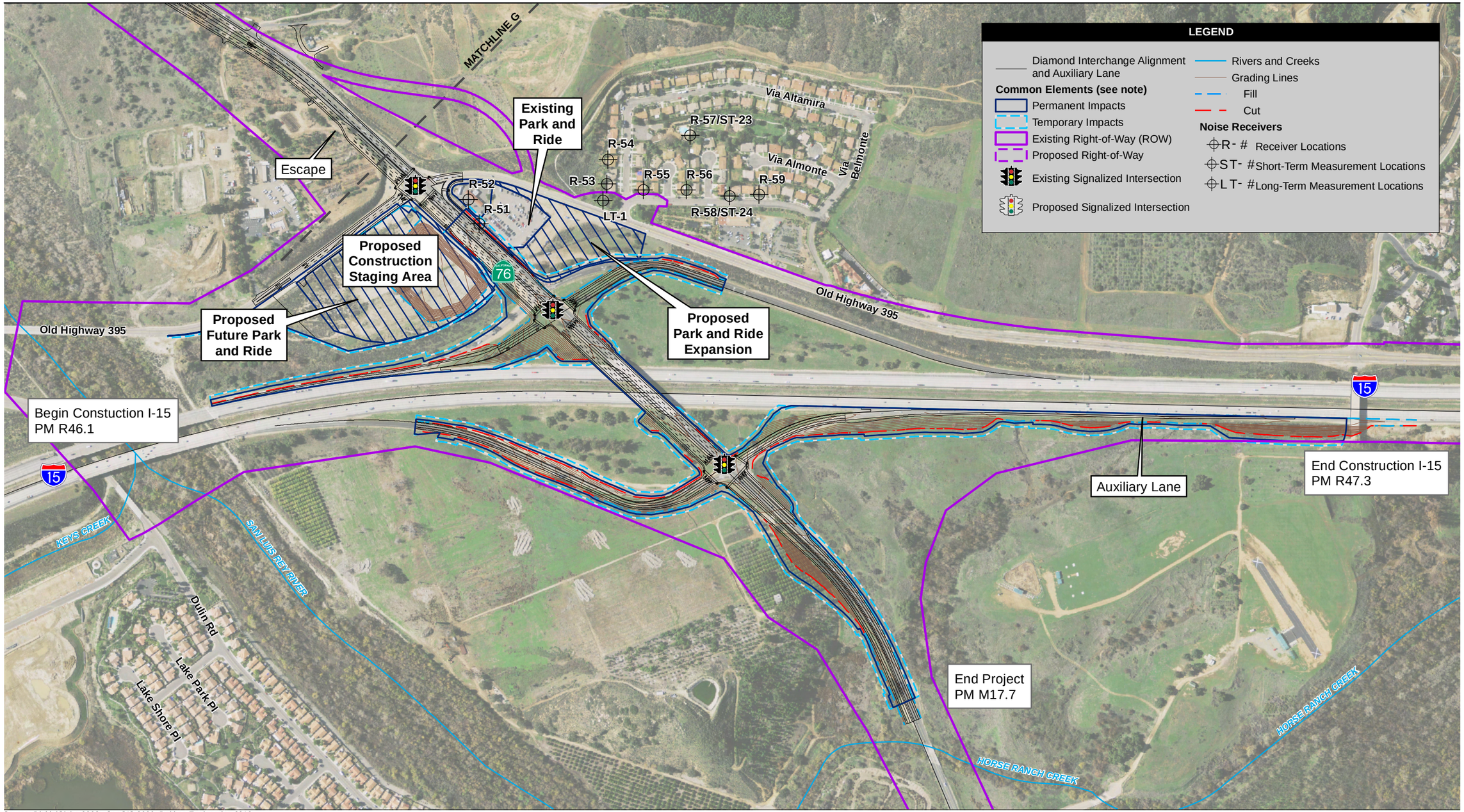


Figure 2.1-4

Partial Clover Leaf Interchange (Preferred; DV-1)



Source: DigitialGlobe 2008; SanGIS 2009; Dokken Engineering 2010

500 250 0 500 Feet

Scale: 1 = 6,000; 1 inch = 500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 2.1-5
Spread Diamond Interchange (DV-2)

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CHAPTER 3
AFFECTED ENVIRONMENT; ENVIRONMENTAL CONSEQUENCES; AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following technical reports were prepared in support of this Final EIR/EIS:

Air Quality Report	July 2010
Archaeological Survey Report	June 2009
Archaeological Survey Report – First Addendum	June 2011
Caltrans Interoffice Traffic Memo	July 2010
Community Impact Assessment	April 2010
Draft Relocation Impact Statement	December 2009
Extended Phase 1 Report	June 2009
Final Relocation Impact Memorandum	September 2011
Final Scour and Location Hydraulic Study	March 2010
Floodplain Encroachment Report	March 2010
Geomorphology and Geophysical Study	November 2009
Hazardous Materials Initial Site Assessment	November 2008
Historic Property Survey Report – First Supplement	June 2010
Historic Property Survey Report – Second Supplement	June 2011
Historic Property Survey Report	January 2010
Historic Resources Evaluation Report	June 2009
Jurisdictional Delineation Report for Waters of the U.S. and State of California	December 2008
Letter Report of Soil Sampling and Analysis	February 2009
Native American Consultation Report	August 2009
Natural Environment Study	August 2010
Noise Abatement Decision Report	April 2010
Noise Study Report	October 2009
Paleontological Report	April 2009
Park and Ride Traffic Generation Report	May 2009
Preliminary Geologic Study	June 2007
Preliminary Geotechnical Report	April 2010
Preliminary Site Investigation	March 2009
Soil Transportation Memo	January 2011
State Route 76 Biological Survey Report	June 2004
Storm Water Data Report	October 2011
Traffic Operations Report	March 2009
Visual Impact Assessment	May 2010
Water Quality Report	August 2010
Wildlife Movement Study	August 2009

The analysis of environmental impacts and proposed mitigation measures presented in the following sections of this document are based on preliminary project design and current environmental information and circumstances. The environmental analysis contained in the Environmental Consequences discussion for each resource area evaluates the potential project effects of both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative, as well as both the partial cloverleaf interchange and the spread diamond

interchange configurations. While the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative would each be located along different alignments and are specifically identified in each of the resource discussions, the interchange configurations would occupy similar footprints within the right-of-way of these alternatives and therefore are not specifically evaluated in most of the resource areas. When applicable, the environmental consequences discussion identifies effects associated with each of the potential interchange configurations; in cases where impacts would be similar, a more generalized discussion focused on the alternative is provided. The Final EIR/EIS draws from the studies for information and incorporates information that may be more current than information contained in the technical reports listed above.

As part of the 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.

- Coastal Zone
- Wild and Scenic Rivers
- Timberland

HUMAN ENVIRONMENT

3.1 LAND USE

The Community Impact Assessment (CIA), a separate technical study prepared in April 2010, serves as the basis for this analysis of land use impacts.

3.1.1 Affected Environment

Existing and Future Land Uses

The proposed project is located within the unincorporated community planning areas of Bonsall and Fallbrook in northern San Diego County. Land uses near the proposed project are generally composed of residential, equestrian facilities, agricultural land, and open space associated with the San Luis Rey River Valley and hilly topography. Agricultural and large-lot or rural residential are the main land uses within the 0.5-mile study area of the two build alternatives. Existing land uses surrounding the proposed project are shown in Figure 3.1-1. Because of the large number of land use categories in the San Diego County General Plan, similar land use categories have been consolidated into a single land use category in Figure 3.1-1 to more clearly convey the land use distribution surrounding the proposed project.

Bonsall

Land uses near the proposed project, within the community of Bonsall, are generally low-density estate lots, businesses, and agricultural uses, and are influenced by the natural hilly topography of the area. Estate lot rural residential (one dwelling unit per 2 and 4 acres, shown as spaced rural residential in Figure 3.1-1) composes the majority of the western portion of Bonsall, which is bisected by the existing SR-76 roadway. Land uses north of the existing SR-76 roadway within the proposed project limits consist of a commercial shopping center, a County of San Diego Department of Public Works road maintenance facility, the Sweetgrass Estates residential neighborhood, the Riverview Church, and vacant land. Land uses south of the existing SR-76 roadway within the proposed project limits are largely agricultural, with large stretches of undeveloped land associated with the San Luis Rey River. A large portion of this land is associated with Vessels Stallion Farm, which is an approximately 2,000-acre property (multiple parcels) whose main operation is breeding race horses. Approximately 450 acres of the approximately 2,000-acre farm are devoted to the horses, while the remaining acres are used for beef cattle, citrus groves, flowers, vegetable crops, and avocado groves.

Commercial uses near the proposed project within Bonsall are generally confined to an area known as the Country Town Area. These commercial uses consist of two shopping centers, one located at the intersection of SR-76 and South Mission Road, which is within the proposed project limits, and one at the intersection of SR-76 and Olive Hill Road, west of the proposed project. These two shopping centers form the central service area for the rural community. In addition to commercial uses, residential density in the Country Town Area is generally higher than in the remainder of Bonsall.

Portions of land throughout Bonsall are designated as vacant or undeveloped. Large amounts of vacant land south of the existing SR-76 roadway within the proposed project limits would remain undeveloped as part of the proposed San Luis Rey River Park. While much of the area is considered undevelopable due to the San Luis Rey River floodplain and steep hillsides, some lots are being developed with large-lot estate homes.

SR-76 to the west of the project has been approved for widening and realignment in two phases. The SR-76 I-5 to Melrose Drive Project has been completed. The SR-76 Melrose Drive to South Mission Road project has been approved and is currently under construction. The SR-76 South Mission Road to I-15 project would complete the proposed SR-76 improvements between I-5 and I-15.

Fallbrook

The topography of the land near the proposed project within the community of Fallbrook is typically hilly, with a mixture of residential and agricultural land use designations similar to those of the surrounding areas. The existing San Diego County General Plan land use map designates the majority of the land within Fallbrook surrounding the proposed project as estate residential (ER), with parcels containing one dwelling unit per 2 to 4 acres (shown as spaced rural residential in Figure 3.1-1). Additionally, the existing San Diego County General Plan land use map designates some land within Fallbrook adjacent to the existing SR-76 roadway as Specific Plan Area. Land uses within this Specific Plan Area consist of the Golf Club of California golf course and Sycamore Ranch residential community, and are shown in Figure 3.1-1 as Recreation, Open Space Parks, Single Family Detached, and Single Family Attached land uses. Other land uses near the existing SR-76 roadway within the proposed project limits include recreation, open space, and agricultural uses. There currently are no large commercial shopping centers near the proposed project in Fallbrook as there are in Bonsall, and there are large contiguous areas of undeveloped land along the existing SR-76 roadway within the proposed project limits. Land uses north of the existing SR-76 roadway within the proposed project limits consist of an orchard, the Golf Club of California and Sycamore Ranch residential community, and individual rural residential units and businesses dispersed along the length of the existing roadway. A Mobil gas station, a mobile hamburger stand with a month-to-month lease, and a Park and Ride facility are located on the northeast side of the SR-76/Old Highway 395 intersection. Land south of the existing SR-76 roadway within the proposed project limits consists of undeveloped land associated with the San Luis Rey River, the Faubus Farms business, a San Diego County Water Authority aqueduct, and the Kendall Palm Nursery. Additionally, a Rainbow Municipal Water District facility is located near the southwest side of the SR-76/Old Highway 395 intersection. The Rancho Monserate Golf Course with its associated residential neighborhood is also located south of the existing SR-76 roadway south of the San Luis Rey River. The majority of land surrounding the SR-76/I-15 interchange is currently undeveloped Caltrans right-of-way.

The community of Fallbrook has been growing, with several residential subdivisions approved in the past 10 years. The Brook Hills Subdivision, which is located north of SR-76 off of Via Monserate, was approved for 110 lots in 2003. Peppertree Park is an ongoing 267-lot residential development off of South Mission Road, approximately 4 miles north of SR-76. As of January 2011, six of the 10 phased units had been recorded as Final Maps.

Pala-Pauma

The Pala-Pauma Community Planning Area contains several large existing and proposed projects such as the Pala Casino Resort, Pauma Casino, Palomar Aggregates Quarry, Orange Grove Power Plant, and Gregory Canyon Landfill.

Development Trends

Projected 2000 to 2030 population growth statistics from SANDAG suggest that population growth and its associated development will continue in Bonsall, Fallbrook, and the region as a whole (Table 3.1-1). Growth in Bonsall and Fallbrook is expected to be much higher than the County average, at 83 percent and 76 percent, respectively. The unincorporated communities of Pala-Pauma, Rainbow, Valley Center, and North Mountain are expected to experience the most dramatic population changes, with increases ranging from 126 to 180 percent. In comparison to the general population trends for the County (estimated at 42 percent growth), the cities of Oceanside and Vista are expected to grow at a slower pace (29 percent). The County's unincorporated area, as a whole, is expected to grow by 63 percent. This is higher than the growth rate for San Diego County as a whole.

Table 3.1-1. Growth Projections for Bonsall and Fallbrook in Comparison to the Surrounding Region

Municipality or Community	2000	2010	2020	2030	Percent Change 2000–2030
Bonsall CPA[1]	8,880	10,739	14,676	16,249	83%
Fallbrook CPA	39,599	43,148	57,446	69,833	76%
North Mountain CPA	2,830	3,270	4,200	7,923	180%
Pala-Pauma CPA	6,176	6,676	8,201	13,937	126%
Rainbow CPA	1,836	2,230	3,429	4,546	148%
Valley Center CPA	15,525	20,757	37,501	40,704	162%
Oceanside	161, 029	186,785	196,482	207,237	29%
Vista	89,857	98,182	106,075	115,768	29%
County of San Diego (Unincorporated)	442,919	504,719	627,142	723,392	63%
County of San Diego	2,813,833	3,245,279	3,635,855	3,984,753	42%

[1] Community Planning Area (CPA) should not be confused with a census designated place. Census and planning boundaries for the communities differ, accounting for the difference in population size.

Planned Land Uses

Planned land uses for the area surrounding the proposed project are shown in Figure 3.1-2. Proposed land use conversions would result in a decrease in future population density for Bonsall by changing the land use designation for the majority of parcels with a residential classification of one dwelling unit per 2 and 4 acres to semirural residential (SR-2) with one dwelling unit per 2, 4, and 8 acres, or semirural residential (SR-4) with one dwelling unit per 4, 8, and 16 acres. Additionally, topographic physical constraints require that much of the land within Bonsall remains at low density. Residential land uses within Fallbrook surrounding the proposed project designated as one dwelling unit per 2 and 4 acres are also proposed to be converted to SR-2 with one dwelling unit per 2, 4, and 8 acres. Additionally, topographic physical constraints restrict development density of large portions of the land within Fallbrook surrounding the proposed project.

Several large developments are planned within Fallbrook near the SR-76/I-15 interchange. These include the Campus Park West Specific Plan, Lake Rancho Viejo Specific Plan, Passerelle, and the Palomar Community College satellite campus (North Education Center). Additionally, the San Luis Rey River Park is planned by the County of San Diego Department of Parks and Recreation, which would create a river park that extends from the historic Bonsall

Bridge easterly to I-15. Details on the size and development type of these projects are provided in Table 3.1-2.

In addition to proposals for substantial development at the SR-76/I-15 interchange, the Liberty Quarry project has been proposed north of SR-76 and west of I-15, near the Santa Margarita River and Temecula. This project was recently denied by the Riverside County Planning Commission on August 31, 2011, and has been appealed to the Board of Supervisors.

Table 3.1-2. Proposed Developments in Project Vicinity

Project Name	Project Jurisdiction and Location	Proposed Uses	Project Status
Palomar Community College Satellite Campus (North Education Center)	County of San Diego; northeast of intersection of SR-76/I-15	Development of extension community college campus on 85-acre site. Development of the project site would be phased over several decades, with an estimated total building square footage of approximately 380,000, which is anticipated to occur around the year 2030. Initial development would consist of approximately 75,000 to 150,000 square feet (ft^2) of development and related parking.	The project has been approved by the County of San Diego and anticipates opening a few buildings, sports fields, and parking spaces in 2011. Final EIR dated June 2008.
Campus Park (Passerelle) Multiple-Use Development	County of San Diego; intersection of SR-76 and I-15	Mixed-use development on 186.3 acres with 1,366 dwelling units within seven different neighborhoods. Includes 13 acres of retail development, 160 acres of open space, 37 acres of parkland, and 23.7 acres of senior/retirement residential development.	Project approved May 2011.
Campus Park West Specific Plan – TM 5338	County of San Diego; northeast of SR-76 and I-15 interchange	Located on 118 acres, project proposes multiple uses, including 355 residential units, 400,000 ft^2 of commercial, 347,000 ft^2 of industrial, 50,000 ft^2 of office space, 11 acres of common open space, and 47 acres of natural open space.	Project is part of Sycamore Springs Specific Plan and Campus Park Specific Plan. Notice of Preparation for EIR and Environmental Update Review Checklist Form issued June 2009.
Lake Rancho Viejo Specific Plan	County of San Diego; south of the intersection of SR-76 and I-15	Residential development with approximately 1,750 units.	Some portions of the project have been approved and constructed. Other portions are currently in construction.
San Luis Rey River Park Master Plan	County of San Diego; an 8.5-mile stretch of the San Luis Rey River between the Oceanside municipal boundary and I-15	Proposed project components include the preservation and conservation of passive open space habitat, establishment of multi-use pedestrian trails, and a series of five active parks in strategic locations. Active parks would include softball, soccer, and multi-use fields; play area;, and picnic areas.	Program EIR certified September 24, 2008.
Liberty Quarry	Riverside County; west of I-15, near Rainbow Valley Boulevard.	Liberty Quarry located on 311 acres. The quarry would be nearly 1,000 feet deep and almost 1 mile long. Five million tons of sand and crushed rock would be mined from the site every year for 50 to 60 years, requiring 1,400 daily truck trips.	NOP and IS issued in June 2007; DEIR public review completed September 18, 2009. The future of this project is undetermined at this time.

3.1.2 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

Existing Land Use Impacts

The Existing Alignment Alternative (Preferred Alternative) may displace residential or nonresidential structures. A detailed discussion of the relocation issues associated with these property impacts is included in Section 3.7, Relocations and Real Property Acquisitions.

The Existing Alignment Alternative (Preferred Alternative) may result in impacts to properties either engaged in agricultural cultivation, including the orchard located at the intersection of SR-76 and Ramona Road and the Kendall Palm Nursery with active farmland, or properties containing soils suitable for agricultural uses. A detailed discussion of impacts to farmlands is described in Section 3.5, Farmlands. These property impacts would not preclude these farms from continuing agricultural production on the remainder of their properties or result in a substantial decrease of the amount of available farmland within the surrounding area.

The Existing Alignment Alternative (Preferred Alternative) would also result in additional impacts to a number of other properties engaged in a variety of uses along this proposed alignment, if this project proceeds past the planning stage. A complete list of these partial property impacts and the existing uses are shown in Table 3.7-1 in Section 3.7, Relocations and Real Property Acquisitions. However, these impacts would not require relocation of the residence, business, or other existing uses on the property. Furthermore, these impacts would not alter the existing properties in a way that would prevent the properties from functioning as they do in their existing form. Overall, property impacts associated with the Existing Alignment Alternative (Preferred Alternative) would not alter the existing land use pattern within the surrounding area.

Future Land Use Impacts

The Existing Alignment Alternative (Preferred Alternative) has been designed to help relieve future local and regional traffic congestion that would result from current and future (projected) population growth, increased residential development, and increased commercial development, primarily within areas surrounding the SR-76 corridor. Therefore, the Existing Alignment Alternative (Preferred Alternative) would be consistent with the land use patterns in the San Diego County General Plan.

Improvements associated with the SR-76/I-15 interchange would occur within the existing Caltrans right-of-way. An area south of SR-76, between Old Highway 395 and the southbound on-ramp, is analyzed in this document for potential future expansion of the Park and Ride lot. The Existing Alignment Alternative (Preferred Alternative) would require partial property acquisitions from parcels to be incorporated into the proposed San Luis Rey River Park. However, the proposed project and the San Luis Rey River Park are being developed concurrently, and Caltrans and the County of San Diego Department of Parks and Recreation are coordinating the development of both projects. The County Park programmatic environmental impact report (PEIR) discusses areas that have been set aside within the proposed park sites for the proposed SR-76 roadway alignments. This coordination would include finalizing locations for access to passive and active recreation areas from SR-76, habitat preserve areas, and the multi-use trail system associated with the San Luis Rey River Park based on the alignment identified as the Preferred Alternative in the Final EIR/EIS for the proposed SR-76 South Mission to I-15 project. Therefore, the Existing Alignment Alternative

(Preferred Alternative) would not preclude development of the San Luis Rey River Park or otherwise prevent construction of any portion of the San Luis Rey River Park. Furthermore, implementation of the Existing Alignment Alternative (Preferred Alternative) would reduce traffic congestion and improve circulation along SR-76 and connected roadways surrounding these proposed/planned park projects. Parks and recreational facilities are discussed in more detail in Section 3.3. Therefore, the Existing Alignment Alternative (Preferred Alternative) would not alter planned land uses within the surrounding area.

Southern Alignment Alternative

Existing Land Use Impacts

The Southern Alignment Alternative may result in multiple property impacts. A detailed discussion of the relocation issues associated with these impacts are described in Section 3.7, Relocations and Real Property Acquisitions. The Southern Alignment Alternative may result in displacement of Vessels Stallion Farm. The relocation of this 2,000-acre property would result in an approximate 3.8 percent property tax loss to the proposed project area. This would be an approximately 0.3 percent loss of property tax revenue relative to San Diego County. It is presumed 50 jobs would be lost, removing an important part of the job market and related economy in the local community. While large portions of Vessels Stallion Farm could remain in agricultural production, introduction of this new roadway would convert agricultural and undeveloped land to roadway uses. Conversion of these land uses within a largely undeveloped area would represent a substantial change to the existing land use pattern.

Similar to the Existing Alignment Alternative (Preferred Alternative), impacts to other properties either engaged in agricultural cultivation or containing soils suitable for agricultural uses would not preclude future agricultural uses on the remainder of the properties or result in a substantial decrease in the amount of available farmland within the surrounding area. All other property impacts do not require relocation of a residence, business, or other existing uses on the property or otherwise alter the existing properties in a way that it would prevent the properties from functioning as they do in their existing form.

Future Land Use Impacts

The Southern Alignment Alternative has been designed to help relieve future local and regional traffic congestion that would result from current and future (projected) population growth, increased residential development, and increased commercial development primarily within areas surrounding the corridor. The proposed Park and Ride facility in an area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way. Coordination with the County of San Diego Department of Parks and Recreation would ensure that the Southern Alignment Alternative would not preclude development of the San Luis Rey River Park or otherwise prevent construction of any portion of the San Luis Rey River Park. Implementation of the Southern Alignment Alternative would reduce traffic congestion and improve circulation along the current SR-76 roadway and connected roadways surrounding these proposed/planned projects.

However, because the Southern Alignment Alternative would introduce a roadway into a largely undeveloped area south of the existing SR-76 roadway, it is reasonably foreseeable that selection of the Southern Alignment Alternative could improve access and reduce the cost of development within this area and potentially alter planned land uses, potentially allowing for

further development south of the San Luis Rey River. This location is also not identified as a potential corridor for the roadway in planning documents.

It should also be noted that implementation of the Southern Alignment Alternative would result in relinquishment of the existing SR-76 roadway to the County of San Diego, which may upgrade the existing roadway to County of San Diego roadway standards. Upgrading the existing roadway to County of San Diego roadway standards could result in impacts to land use as well. However, these upgrades would not be part of this proposed project and would occur at an undetermined time in the future, if at all. Land use impacts associated with upgrading the existing roadway to County of San Diego roadway standards would be evaluated under a separate environmental review process.

No Build Alternative

The No Build Alternative would not impact existing and/or planned uses, because the roadway would remain as transportation use in its current location as it is described in planning documents. The roadway would not be widened or realigned, which could require changes in land uses as proposed under the proposed build alternatives.

3.1.3 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative)

Caltrans has undertaken efforts to integrate the proposed project with the adjacent/adjoining communities of Bonsall and Fallbrook. Efforts between Caltrans and the County of San Diego to work cooperatively to avoid land use compatibility conflicts with state transportation facilities are ongoing.

Several alignment options were developed and reviewed in the design of the proposed project. Every attempt was made to minimize the effects to land use and still meet project requirements. Wherever possible, the Existing Alignment Alternative (Preferred Alternative) has been designed to follow the existing SR-76 alignment to minimize impacts to land use and has undergone several design iterations to avoid and/or minimize potential impacts to land use.

Southern Alignment Alternative

Similar coordination efforts and design considerations were incorporated into development of the Southern Alignment Alternative. However, the Southern Alignment Alternative would introduce a new roadway into an undeveloped area that is not identified as having a major roadway traversing it, and it would have impacts to both existing and planned land uses. Mitigation for impacts to existing land uses would be infeasible and impacts would remain substantial.

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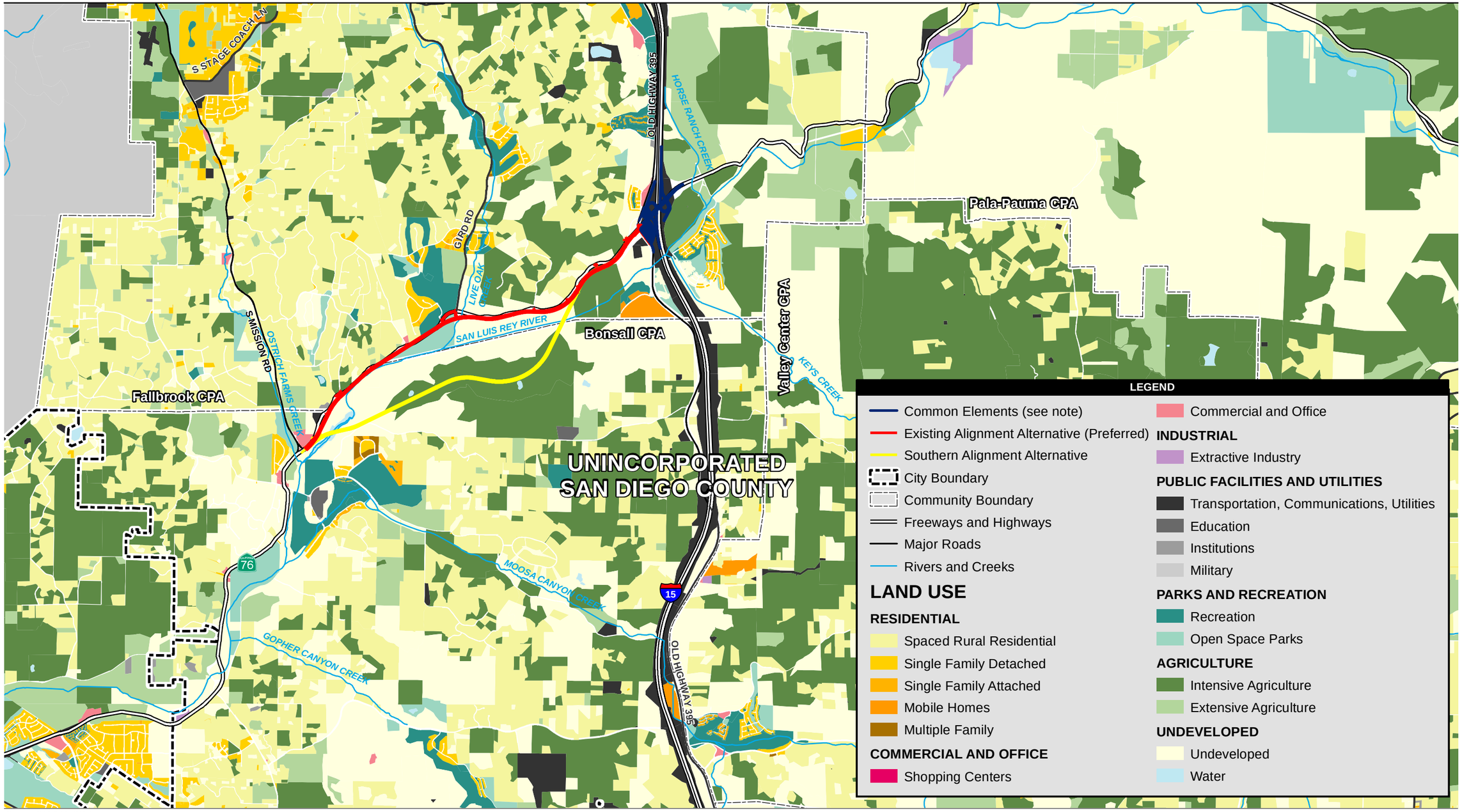


Source: SANDAG 2008

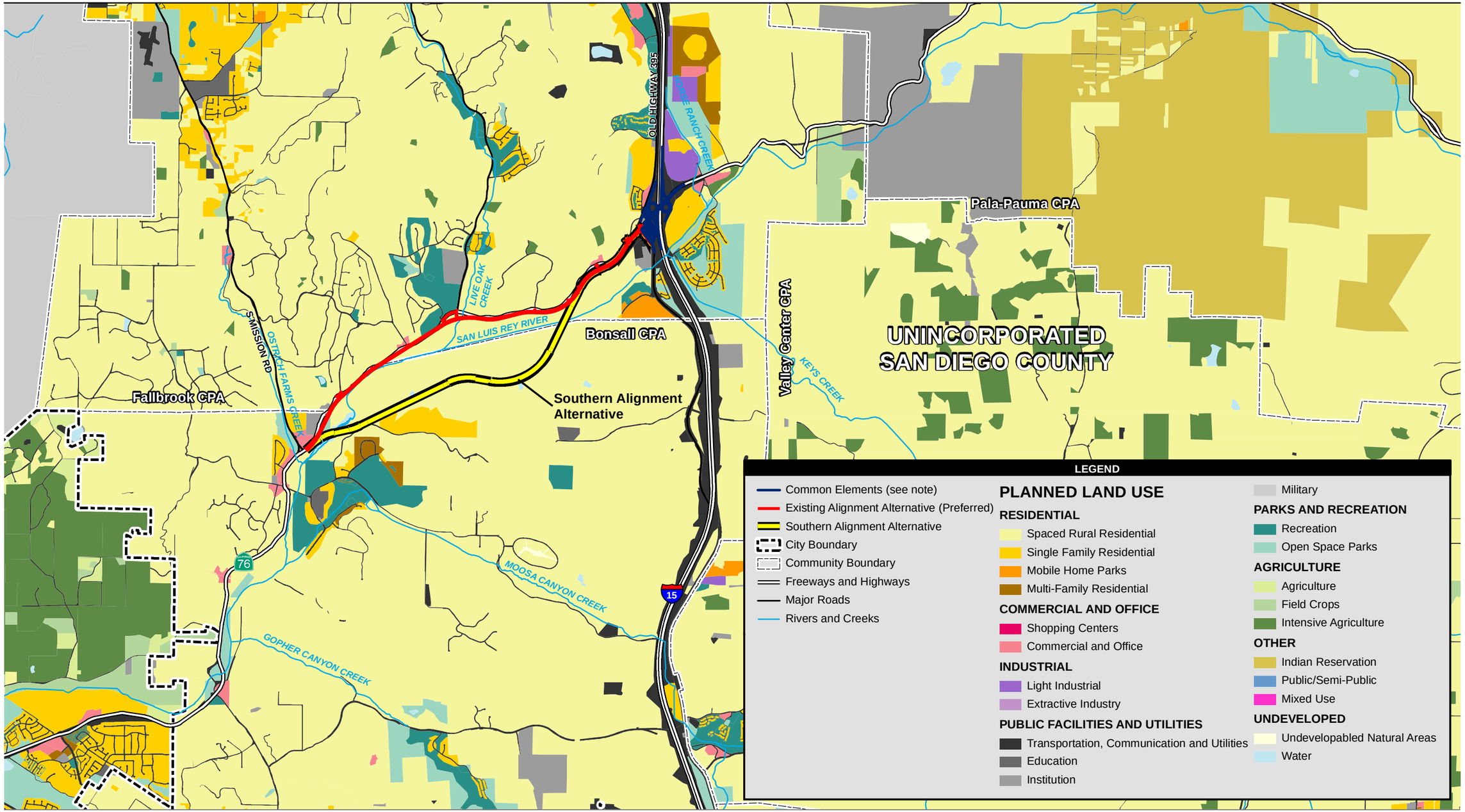
1 0.5 0 1 Miles

Scale: 1:63,360; 1 inch = 1 mile

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.1-1
Existing Land Use

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_01_1_Existing_LU.mxd, 10/21/2011, augellop



Source: SANDAG 2008

1 0.5 0 1 Miles

Scale: 1:63,360; 1 inch = 1 mile

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.1-2
Planned Land Use

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

The CIA, a separate technical study prepared in April 2010, serves as the basis for this analysis of consistency with state, regional, and local plans and programs.

3.2.1 Affected Environment

Plans and Programs

San Diego County General Plan

The proposed project is located within an unincorporated area of San Diego County. Therefore, the San Diego County General Plan is the primary document considered in shaping the long-term development of the area. The San Diego County General Plan was updated and adopted by the San Diego County Board of Supervisors in August 2011. The proposed project was analyzed for consistency with the goals and policies of the General Plan, prior to its adoption. Revisions in this section of the EIR/EIS reflect changes made to the San Diego County General Plan after the public review period for the Draft EIR/EIS. Chapter 2 of the San Diego County General Plan contains the general plan's Guiding Principles that have been adopted to "[p]rovide for the development of land uses, investment in infrastructure and public services, and conservation of natural resources that enable the County's residents and businesses to enjoy a more sustainable environment, economy, and well-being and health." The San Diego County General Plan recommends urban growth be directed to areas within or adjacent to existing urban areas to protect natural resources and reduce sprawl. In coordination with the County of San Diego, SANDAG, the regional planning agency for the county, has developed existing and planned land use maps based on regional growth forecasts. These existing and planned land use maps for the project area and surrounding vicinity are shown in Figures 3.1-1 and 3.1-2, respectively.

The Mobility Element within the San Diego County General Plan states that it provides a framework for a balanced, multi-modal transportation system for the movement of people and goods within the unincorporated areas of the County of San Diego. It further states in its Guiding Principles for Mobility that "[t]he Mobility Element balances competing goals of accommodating trips generated by land use, while striving to retain a transportation network that complements, rather than impacts, the character of communities, which is generally rural in much of the unincorporated County. Therefore, widening of roads, which can dramatically change the character of a community, should be pursued only after environmental and community character impacts are also considered." The Mobility Element identifies the road classifications of various transportation corridors in the County, the existing major road system, and the planned road system intended to meet the needs of the Land Use Element and growth projections. Similarly, the Mobility Element of the San Diego County General Plan identifies a roadway network that would adequately support the land use designations laid out in the land use map of the General Plan. A major goal of the San Diego County Mobility Element is to create a safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities. Another major goal of the Mobility Element is to "[c]reate a road network that provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns, while supporting other General Plan goals such as providing environmental protections and enhancing community character."

Community plans for the specific planning areas such as Bonsall and Fallbrook are secondary planning documents that reflect the overall goals of the San Diego County General Plan while

focusing on specific or unique issues within the individual area. Each of the community plans were concurrently updated to support implementation of the Vision and Guiding Principles of the San Diego County General Plan.

Bonsall Community Plan

The Bonsall Community Plan is a component of the San Diego County General Plan and was updated and adopted in August 2011. The main land use goal contained in the Bonsall Community Plan is "to preserve and enhance the rural community character of Bonsall, while providing adequate levels of local services to residents, and allowing a diversity of land uses."

The primary goal of the Bonsall Community Plan Circulation and Mobility Element is to "develop a circulation system which will preserve the rural character of the community and provide a safe, balanced transportation system which includes automobile, bicycle, equestrian, and pedestrian users." Policies set out in the Circulation and Mobility Element are intended to maintain the rural nature of the area by routing traffic around Bonsall onto specific routes indicated within the Mobility Element of the San Diego County General Plan. Circulation and Mobility Element Policy CM-1.1.3 of the Bonsall Community Plan states: "Coordinate with Caltrans to design and construct State Route 76, East Vista Way (S13), and Interstate 15 to efficiently carry traffic through the Bonsall Community Plan Area." Similarly, the community plan states that major traffic volumes should be routed around Bonsall on roads such as SR-76 and East Vista Way, rather than through the interior of the community, to preserve the rural setting of the community.

A goal of the Conservation and Open Space Element of the Bonsall Community Plan is to continue "agriculture as a prominent use throughout the Bonsall community." The Bonsall Community Plan also notes that agriculture is important to maintaining the rural character of the community and recommends that agricultural use, and land suitable for agricultural usage, should be protected from land uses that may be incompatible with agriculture. Policy COS-1.1.5 of the Conservation and Open Space Element states: "Require that landscaping be designed to prevent erosion on graded sites and, if adjacent to sensitive habitats, require re-vegetation with the appropriate drought tolerant plant species with specific restrictions on the use of any invasive species."

Lastly, the goal of the Conservation and Open Space Element is to preserve floodplains and watercourses in their natural state to provide protection from loss of life and property.

Fallbrook Community Plan

The Fallbrook Community Plan is a component of the San Diego County General Plan and was updated (April 2010) and adopted in August 2011, and formal approval by the Board of Supervisors is pending. A primary land use goal of the Fallbrook Community Plan is to allow "a variety of housing types that accommodate the forecast population increase while retaining the rustic charm of the present living environment." Residential policies of the Fallbrook Community Plan serve to preserve the rural feel of the community by concentrating higher density residential uses in the town center area of the community, north of the proposed project area, and encouraging the "use of open space, architecture, and building materials which are in harmony with the natural environment" to maintain and promote the existing character of the community.

The overall objective of the Circulation and Mobility Element of the Fallbrook Community Plan is "to guide and encourage the development of a logical and balanced transportation network,

which will allow safe and efficient travel throughout this rural community." The Circulation and Mobility Element sets out to achieve this goal by stating that the transportation network should be designed to follow existing road alignments where possible; adequately accommodate automobile, public transit, and nonmotorized modes of travel; and encourage the preservation of the rural and agricultural character of the community. Additionally, the Circulation Element states that "off-street parking and loading facilities [be] designed in such a manner that the completed development presents an aesthetically pleasing appearance and provides for both adequate circulation and maintenance."

A goal of the Conservation and Open Space Element of the Fallbrook Community Plan is to support "agriculture and agriculturally oriented services that promote agriculture as an important component in the economic base of Fallbrook." The Conservation and Open Space Element also states that combining residential uses with light agricultural uses should be encouraged and "[d]iscourage intensive commercial livestock operations and types of agricultural processing which may be detrimental to the residential population

" Conservation and Open Space Element Policy COS 1.2.1 is intended to encourage preservation of areas unsuitable for intense development as permanent open space and to "[e]ncourage floodplains and natural stream courses to be preserved in permanent open space uses limited to recreational or light agriculture uses."

The Fallbrook Community Plan also contains the I-15 Corridor Subregional Plan, which intends "to promote orderly development, protect environmental and human-made resources, and implement the County's objectives for growth management and the structure of government for the subregion." Goals of the I-15 Corridor Subregional Plan include providing a land use pattern sensitive to the opportunities and constraints of the I-15 corridor; providing a circulation network capable of handling corridor and subregional traffic, including public and nonmotorized modes of travel; and protecting environmental resources along the I-15 corridor, including those contained within resource conservation areas.

Natural Communities Conservation Plans

San Diego County is currently preparing Multiple Species Conservation Plan (MSCP) subarea plans under the State of California's Natural Communities Conservation Plan (NCCP) Act of 1992. The San Diego County NCCP area is divided into the North County and South County MSCPs. The two build alternatives cross land that is located within the draft North County MSCP (NCMSCP) subregion. The Draft NCMSCP is a regional habitat conservation plan that is being prepared in compliance with the Federal Endangered Species Act (FESA) Section 4(d) rule that defines conditions under which "take" of a species could occur without violations of the FESA. Once the County adopts the NCMSCP, USFWS and CDFG will be able to sign an Implementing Agreement that, once signed, will bestow approval authority to the County for impacts to state and federal endangered species for projects that are determined to be in compliance with the NCMSCP.

The Draft NCMSCP is a comprehensive habitat conservation planning program that addresses the needs of multiple species and the preservation of native vegetation communities. Pre-Approved Mitigation Areas (PAMAs) and preserve areas are associated with the San Luis Rey River Linkage along the river corridor, which extends east from the City of Oceanside boundary across I-15 to connect with the Rice Canyon Linkages and toward the Palomar Mountain foothills. The San Luis Rey River Linkage encompasses the proposed project build alternatives. Caltrans is not a signatory to local NCCPs but strives for consistency with the plans. Permitting

is therefore processed through separate consultation with the resource agencies. It is likely that any biological mitigation measures required would be similar to those outlined under the Draft NCMSCP and PAMA regulations.

The Draft NCMSCP offers regional guidance on analyzing impacts to natural resources within the vicinity of the BSA. While Caltrans is a cooperating partner in this program, it is not under the authority of the NCMSCP and works directly with the resource agencies (e.g., U.S. Fish and Wildlife Service [USFWS], U.S. Army Corps of Engineers [USACE], and California Department of Fish and Game [CDFG]).

The Draft NCMSCP acknowledges the proposed project and states that the County coordinated planning efforts for the proposed project into development of the Draft NCMSCP. The proposed project would strive to be consistent with the plan once finalized. Mitigation for the proposed segment from South Mission Road to just east of I-15 would be developed using the Draft NCMSCP as guidance. The NCMSCP does not include Caltrans right-of-way. FHWA has recommended that mitigation standards and protocols defined in approved HCPs be applied to those projects within areas covered by HCPs (memo, FHWA 2004).

San Diego County Community Trails Master Plan

The main goal of the San Diego County Community Trails Master Plan (CTMP), which was unanimously approved by the San Diego County Board of Supervisors on July 12, 2005, is to establish and protect an enjoyable, efficient, and safe network of public riding and hiking trails. The CTMP has two types of trails: community trails and community pathways. Community trails are soft-surface facilities for single or multiple uses by pedestrians, equestrians, and mountain bicyclists. They are typically located away from vehicular roads and are primarily recreational but can also serve as circulation routes for individuals using alternative modes of transportation. Community pathways are soft-surfaced facilities intended to serve both circulation and recreation purposes. They are nonmotorized transportation facilities located within a parkway or road right-of-way that help make critical connections and are an integral part of a functional trail system. Riding and hiking trails located within the road right-of-way are considered community pathways. The CTMP is made up of a series of subregional plan areas, including Bonsall and Fallbrook, although the policies of the plan apply to all of the subregional areas.

The CTMP designates two community trails that would traverse the length of the San Luis Rey River and would run parallel to the existing SR-76 roadway. These two trails would be constructed as a part of the San Luis Rey River Park Master Plan, which plans to implement the CTMP to the extent possible. Additionally, the following CTMP proposed trails and pathways would potentially be impacted by the proposed project:

- East Mission Road Pathway (Fallbrook #7)
- South Mission Road Pathway (Fallbrook #7A, Bonsall #20)
- South Old Highway 395 Pathway (Fallbrook #7B)
- San Luis Rey River North Trail (Fallbrook #7C, Bonsall #1)
- San Luis Rey River South Trail (Fallbrook #19, Bonsall #2)
- Via Monserate Pathway (Fallbrook #7D)
- Gird Road Trail (Fallbrook #8D)
- Linda Vista Trail (Fallbrook #10)
- Estate Drive Trail (Fallbrook #10C)
- Pala Road Pathway (Fallbrook #13)

- La Cañada/Hillrise Trail (Fallbrook #10D)
- Aqueduct Trail (Fallbrook #16A)
- West Lilac Road Pathway (Bonsall #12)

San Luis Rey River Park Master Plan

The County of San Diego Department of Parks and Recreation developed the San Luis Rey River Park Master Plan along the river corridor. The San Luis Rey River Park Master Plan establishes a framework for the creation of a river park within the San Luis Rey River Valley from the historic Bonsall Bridge easterly to I-15 that includes passive and active recreation areas, a habitat preserve, and a multi-use trail system. The County of San Diego Board of Supervisors approved the San Luis Rey River Park Master Plan and certified the San Luis Rey River Park Master Plan Programmatic Environmental Impact Report on September 24, 2008. Project-specific plans and corresponding CEQA documents would be prepared for specific park improvements in the future.

The San Luis Rey River Park Master Plan would implement the CTMP to the extent possible, and would include construction of two community trails that would traverse the length of the San Luis Rey River near the proposed project. Additionally, more CTMP trails would be created as a part of the San Luis Rey River Park Master Plan. Creation of these trails would entail the formalization of selected existing unofficial minor-use and major-use trails in the park's planning area. The San Luis Rey River Park Master Plan would combine portions of these existing unofficial-use trails with new trail segments to create a network of trails throughout the park. The vast majority of unofficial-use trail segments not incorporated into the trails network would be decommissioned (closed) and restored and preserved as natural habitat (County of San Diego 2007).

San Diego Association of Governments Regional Comprehensive Plan

SANDAG's Regional Comprehensive Plan (RCP) for the San Diego region is a compilation of local and regional plans that recognizes that each jurisdiction in the region makes its own decisions regarding land use. The RCP provides the long-term planning framework for the San Diego region that will guide future growth within the region while balancing population, housing, and employment growth with habitat preservation, agriculture, open space, and infrastructure needs.

San Diego Association of Governments Regional Transportation Plan 2030 and Recently adopted 2050 Regional Transportation Plan

The 2030 San Diego Regional Transportation Plan: Pathways for the Future (2030 RTP), adopted on November 30, 2007, lays out a regional transportation system to enable current and future planning efforts to enhance quality of life. The RTP is a part of the RCP and identifies specific transportation needs throughout the next 25 years that would enhance the land use/transportation connection in development within the San Diego region. The proposed project is identified in the 2030 RTP as a TransNet Early Action Project. The project is also included in the recently adopted 2050 RTP.

San Diego Association of Governments 2010 Regional Transportation Improvement Program

The Final 2010 Regional Transportation Improvement Program (2010 RTIP), was adopted by SANDAG on September 24, 2010. The 2010 RTIP was developed to implement the San Diego region's overall transportation strategy for providing mobility and improving the efficiency and safety of the transportation system. Federal regulations also require SANDAG to conduct an air quality conformity analysis of all regionally significant projects that increase the transportation system capacity. The 2010 RTIP also incrementally implements the latest update to the RTP. The proposed project is identified in the 2010 RTIP as MPO ID CAL29B.

3.2.2 Environmental Consequences

This section provides a brief summary of the consistency of each of the proposed build alternatives with the goals and policies of applicable planning documents. Table 3.2-1 provides a detailed discussion of the consistency of each of the proposed build alternatives with the goals and policies of applicable planning documents.

Table 3.2-1. Consistency with State, Regional, and Local Plans and Programs

Relevant Key Goals and Policies	Alternative Considerations	Alternative Consistency
Bonsall Community Plan (August 2011)		
Community Character Policy LU-1.1.1: Require development in the community to preserve the rural qualities of the area, minimize traffic congestion, and to not adversely affect the natural environment.	The Existing Alignment Alternative (Preferred Alternative) would reduce the rural character of Bonsall by increasing the pavement hardscape of SR-76 and altering the visual landscape. However, the Bonsall Mobility Network map shows the existing alignment of SR-76 to be widened to a Prime Arterial from Oceanside city limits to South Mission Road and widened to a Major Road from South Mission Road to the Fallbrook community boundary. Therefore, the Bonsall Community Plan anticipates the conversion of existing rural areas to accommodate the widening of SR-76. The Southern Alignment Alternative would reduce the rural character of Bonsall by introducing a new roadway into an undeveloped area and displacing Vessels Stallion Farm. The Bonsall Mobility Network map shows SR-76 to be widened along its existing alignment. Therefore, the Bonsall Community Plan does not anticipate the conversion of existing rural areas to accommodate relocation of SR-76 to the Southern Alignment Alternative The No Build Alternative would preserve the rural character of Bonsall.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this policy in order to reduce traffic congestion by widening SR-76 along its existing alignment. The Southern Alignment Alternative would be inconsistent with this goal due to the conversion of undeveloped rural land and displacement of Vessels Stallion Farm along an alignment that does not follow the existing SR-76 alignment. The No Build Alternative would be consistent with this goal.
Community Growth	The Existing Alignment Alternative (Preferred Alternative) would improve traffic circulation but would reduce the	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this

Relevant Key Goals and Policies	Alternative Considerations	Alternative Consistency
Goal LU-2.2: The San Luis Rey River Valley retains its rural character, while urbanized development remains within neighboring cities that are discouraged from annexing areas of Bonsall.	rural character of Bonsall by increasing the pavement hardscape of SR-76 and altering the visual landscape. However, the Bonsall Mobility Network map shows the existing alignment of SR-76 to be widened to a Prime Arterial from Oceanside city limits to South Mission Road and widened to a Major Road from South Mission Road to the Fallbrook community boundary. Therefore, the Bonsall Community Plan anticipates the conversion of existing rural areas to accommodate the widening of SR-76. The Southern Alignment Alternative would improve traffic circulation but would reduce the rural character of Bonsall by introducing a new roadway into an undeveloped area and displacing Vessels Stallion Farm. The Bonsall Mobility Network map shows SR-76 to be widened along its existing alignment. Therefore, the Bonsall Community Plan does not anticipate the conversion of existing rural areas to accommodate relocation of SR-76 to the Southern Alignment Alternative. The No Build Alternative would preserve the rural character of Bonsall, but it would not provide adequate transportation facilities to handle the projected increase in traffic volumes in the community.	goal. The Southern Alignment Alternative would be inconsistent with this goal due to the conversion of undeveloped land and displacement of Vessels Stallion Farm along an alignment that does not follow the existing SR-76 alignment. The No Build Alternative would be consistent with this goal.
<u>Rural and Agricultural Character</u> Policy LU-1.1.2: Maintain the existing rural lifestyle by continuing the existing pattern of residential, equestrian, and agricultural uses within the Bonsall CPA.	The Existing Alignment Alternative (Preferred Alternative) would convert 71.2 acres (0.08 percent of total County farmland) of agricultural soils, a majority of which is located within Bonsall. The farmland conversion would be longitudinal and would not preclude the agricultural activities continuing in Bonsall. However, the Bonsall Mobility Network map shows the existing alignment of SR-76 to be widened to a Prime Arterial from Oceanside city limits to South Mission Road and widened to a Major Road from South Mission Road to the Fallbrook community boundary. Therefore, the Bonsall Community Plan anticipates the conversion of existing rural areas to accommodate the widening of SR-76. The Southern Alignment Alternative would directly convert 82.8 acres (0.09 percent of total County farmland) of agricultural soils, the majority of which	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this policy in order to reduce traffic congestion by widening SR-76 along its existing alignment. The Southern Alignment Alternative would be inconsistent with this goal along an alignment that does not follow the existing SR-76 alignment. The No Build Alternative would be consistent with this goal.

Relevant Key Goals and Policies	Alternative Considerations	Alternative Consistency
	is located within Bonsall. The farmland conversion would be longitudinal and would not preclude the agricultural activities continuing in Bonsall. The Bonsall Mobility Network map shows SR-76 to be widened along its existing alignment. Therefore, the Bonsall Community Plan does not anticipate the conversion of existing rural areas to accommodate relocation of SR-76 to the Southern Alignment Alternative. The No Build Alternative would not have an impact on agricultural lands in Bonsall.	
Circulation Goal CM-1.1: A circulation system which preserves the rural character of the community and provide a safe, balanced transportation system that includes automobile, bicycle, equestrian, and pedestrian users.	Both proposed build alternatives would improve traffic circulation along SR-76 and improve operational characteristics. Implementation of the proposed project is projected to improve the LOS along SR-76 between South Mission Road and I-15. The Park and Ride feature would facilitate transit usage and promote carpooling, thereby reducing the number of single-occupancy vehicles traveling on I-15 and SR-76, which could further reduce traffic congestion both locally and regionally. Additionally, the roadway shoulders of each alternative could be used by both pedestrians and bicyclists. Both build alternatives would reduce the rural character of the community. The Existing Alignment Alternative (Preferred Alternative) would reduce the rural character of Bonsall by increasing the pavement hardscape of SR-76 and altering the visual landscape. The Southern Alignment Alternative would reduce the rural character of Bonsall by introducing a new roadway into an undeveloped area and displacing Vessels Stallion Farm. The No Build Alternative would preserve the rural character of the community, but it would not provide a balanced transportation system that includes improvements to SR-76 for automobile, bicycle, equestrian, and pedestrian users.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be inconsistent with this goal due to its impacts to rural character. The No Build Alternative would be inconsistent with this goal because the existing SR-76 roadway does not meet current Caltrans roadway standards and due to the current lack of accommodations for bicycles, equestrians, and pedestrians.
Community Facilities Goal LU-6.1: Infrastructure and public utilities that are provided concurrent to	Both build alternatives would improve the community's transportation infrastructure. Although both alternatives would cause visual and	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal.

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development in a manner compatible with community character while minimizing visual and environmental impacts.	environmental impacts, the impacts would be mitigated and would include restoration of disturbed lands to native habitat. The No Build Alternative would not cause visual and environmental impacts, but it would not provide necessary transportation infrastructure to accommodate planned development.	The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would not be fully consistent with this goal.
Resource Conservation and Management Goal COS-1.1: The preservation of the unique natural and cultural resources of Bonsall, the San Luis Rey River and associated watershed, with continued support for its traditional rural and agricultural life-style. Policy COS-1.3.1: Encourage the protection of all sensitive lands and habitat as identified by federal, State, and County guidelines such as oak and willow riparian, coastal, and Diegan sage scrub, native grasslands and wetlands.	Both build alternatives would result in biological impacts. However, impacts to biological resources would be mitigated at ratios negotiated with the relevant resource agencies. Pursuant to the SANDAG 2004 TransNet Sales Tax Extension Ordinance, the SR-76 project should implement the "net benefit" mitigation standard. Its "direct and indirect impacts to sensitive plant and animal populations, and to the function of the wildlife corridors, should be mitigated in order to produce an on-site 'net benefit' to species and to the movement of wildlife." Biological mitigation associated with the proposed project would preserve and restore large areas and improve wildlife crossings. Implementation of temporary and permanent pollution prevention and treatment best management practices (BMPs) would ensure that both build alternatives would not degrade water quality. Both build alternatives would not adversely affect any cultural resources. The No Build Alternative would not adversely affect any cultural resources.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal and policy. The Southern Alignment Alternative would be inconsistent with this goal and Policy because it would fragment existing natural open space. The No Build Alternative would be consistent with this goal and policy.
Floodplains and Watercourses Goal COS-1.5: Floodplains and watercourses preserved in their natural state that provide protection from loss of life and property through development regulations in floodplains and other wetland areas Policy 1.5-2: Utilize the linear geographic qualities provided by the floodplain as locales for nature preserves, open space corridors, community footpaths, and parkland.	Both build alternatives were designed to minimize impacts to the river and floodplain. In efforts to minimize or avoid some of its impacts to the San Luis Rey River, the proposed highway was located as far away from the river as possible. Complete avoidance is not practicable and the quality of use of the floodplain for nature preserves and open space corridors would be reduced. However, the Bonsall Mobility Network map shows the existing alignment of SR-76 to be widened to a Prime Arterial from Oceanside city limits to South Mission Road and widened to a Major Road from South Mission Road to the	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal and policy. The Southern Alignment Alternative would be consistent with this goal and policy. The No Build Alternative would be consistent with this goal and policy.

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	Fallbrook community boundary. Therefore, the Bonsall Community Plan anticipates the conversion of the existing floodplain to accommodate the widening of SR-76. Both build alternatives would be assessed for the inclusion of temporary, pollution prevention, and treatment BMPs, to ensure that any potential for discharge of contaminants would be minimized. The total floodplain encroachment for the Existing Alignment Alternative (Preferred Alternative) is 55.9 acres and would result in a maximum increase in water surface elevation (WSE) of the 100-year floodplain of 3.0 inches. Selection of the Existing Alignment Alternative (Preferred Alternative) would not result in a substantial floodplain encroachment. The total floodplain encroachment for the Southern Alignment Alternative is 79.2 acres and would result in a maximum increase in WSE of the 100-year floodplain of 6.7 inches. This increase in the WSE for the Southern Alignment Alternative would not be considered a substantial floodplain encroachment. The No Build Alternative would not result in any additional encroachment into the 100-year floodplain beyond those areas where the existing roadway is already within the 100-year floodplain.	
<u>Plant and Animal Habitats and Wildlife Corridors</u> Policy COS-1.3.1: Encourage the protection of all sensitive lands and habitat as identified by federal, state, and county guidelines such as oak and willow riparian, coastal and Diegan scrub, native grasslands, and wetlands.	The proposed project would result in biological impacts. However, wildlife crossings have been proposed for both build alternatives. Impacts to biological resources would be mitigated at ratios negotiated with the relevant resource agencies. Wherever possible, encroachment into sensitive habitats and/or habitats that could support sensitive species has been kept to a minimum. The proposed project would strive to be consistent with the Draft NCMSCP and would not preclude development of open space areas associated with the San Luis Rey River Park. The No Build Alternative would not result in any adverse effects to vegetation and wildlife.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be consistent with this goal. However, the Southern Alignment Alternative would result in greater indirect effects to the PAMA than the Existing Alignment Alternative (Preferred Alternative). The No Build Alternative would be consistent with this goal.

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Parks and Recreation Goal COS-2.1: A balanced system of local parks, open space, riding and hiking trails, with outdoor recreation facilities and services, which incorporate the outstanding natural features of the CPA and meet the needs of the residents of the Bonsall community.	Neither build alternative would impact any existing designated parks or recreational facilities. The proposed project and the San Luis Rey River Park are being developed concurrently, and Caltrans and the County of San Diego Department of Parks and Recreation are coordinating the development of both projects. The County Park PEIR discusses areas that have been set aside within the proposed park sites for the SR-76 roadway alignments. The County is dedicated to ensuring that final design of the proposed park would be compatible with the proposed improvements to SR-76. The No Build Alternative would not result in any adverse effects to parks and recreation facilities. Caltrans and the County would coordinate to ensure that final design of the proposed park would be compatible with the existing alignment of SR-76.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be consistent with this goal.
Fallbrook Community Plan (August 2011)		
Community Character Issue LU 1.1: Fallbrook CPA currently has a unique village atmosphere characterized by predominately low density residential development and agricultural uses. The CPA is expected to grow from its present population of approximately 44,378 (2008) to approximately 61,000 persons by the year 2030 (SANDAG Population Projection). Goal LU 1.1: Perpetuate the existing rural charm and village atmosphere while accommodating growth.	The Existing Alignment Alternative (Preferred Alternative) would establish an urban transportation facility, but would not impact the Fallbrook Village and would accommodate the community's planned growth. The Southern Alignment Alternative would establish an urban transportation facility, but would not impact the Fallbrook Village and would accommodate the community's planned growth. The No Build Alternative would not provide the needed transportation infrastructure to accommodate the population growth anticipated by the Fallbrook Community Plan.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this issue and goal. The Southern Alignment Alternative would be consistent with this issue and goal. The No Build Alternative would be inconsistent with this goal.
Surface, Groundwater, and Watersheds Policy Policy COS 1.2.1: Encourage floodplains and natural stream courses to be preserved in permanent open space and uses limited to recreational or light agriculture uses.	Although the proposed project would convert portions of the San Luis Rey River floodplain to transportation uses, the proposed project would not preclude development of open space areas associated with the San Luis Rey River Park. In addition, the Fallbrook Mobility Network map shows the existing alignment of SR-76 to be widened to a Prime Arterial from Bonsall Community Plan boundary to I-15. Therefore, the Fallbrook Community Plan anticipates the conversion of a portion of the San Luis Rey floodplain to accommodate the widening of SR-76. Consistency with	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this policy of the Fallbrook Community Plan. The Southern Alignment Alternative would be inconsistent with this policy. The No Build Alternative would be consistent with this policy.

Relevant Key Goals and Policies	Alternative Considerations	Alternative Consistency
	the Draft NCMSCP and San Luis Rey River Park is discussed below. Both build alternatives were designed to minimize impacts to the river and floodplain. In efforts to minimize or avoid some of its impacts to the San Luis Rey River, the proposed highway was located as far away from the river as possible. Complete avoidance is not practicable. The total floodplain encroachment for the Existing Alignment Alternative (Preferred Alternative) is 55.9 acres, which would not be a substantial floodplain encroachment. The Southern Alignment Alternative would have a greater impact to the 100-year floodplain. The total floodplain encroachment for the Southern Alignment Alternative is 79.2 acres, which would not result in a substantial floodplain encroachment. The No Build Alternative would be consistent with the preservation of floodplain open space and the San Luis Rey River Park. However, portions of the existing SR-76 roadway would remain within the 100-year floodplain and be subject to flooding.	
<u>Community Facilities</u> Issue LU 5.1: The demands made by a growing population can only be met through careful planning and management of public utilities and community facilities. Policy LU 5.1: Adequate and equitable financed public services and facilities to meet the demands of a growing population.	Both build alternatives would establish a transportation facility necessary to accommodate the community's planned growth. The No Build Alternative would not establish a transportation facility necessary to accommodate the community's planned growth.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this issue and policy. The Southern Alignment Alternative would be consistent with this issue and policy. The No Build Alternative would not be consistent with this issue and policy.
<u>Community Beautification and Design</u> Policy LU 2.4.1: Require development to preserve viable mature trees and significant land forms in all public and private development projects, to the extent feasible.	The Existing Alignment Alternative (Preferred Alternative) would impact mature trees and significant land forms though cut and fill grading, including within the San Luis Rey River floodplain. However, the Fallbrook Mobility Network map shows the existing alignment of SR-76 to be widened to a Prime Arterial from the Bonsall Community Plan boundary to I-15. Therefore, the Fallbrook Community Plan anticipates the conversion of mature trees and landforms to accommodate the widening of SR-76.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this policy. The Southern Alignment Alternative would be inconsistent with this policy. The No Build Alternative would be consistent with this policy.

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	The Southern Alignment Alternative would impact mature trees and significant land forms and would not be designed to follow the existing SR-76 alignment. The No Build Alternative would not result in any adverse effects to mature trees and significant land forms.	
Circulation and Mobility Element The overall objective of the Circulation and Mobility Element of the Fallbrook Community Plan is to guide and encourage the development of a logical and balanced transportation network which will allow safe and efficient travel throughout this rural community. Issue CM 1.1: To achieve logical and balanced transportation network, which should be designed to follow existing road alignments where possible; Adequately accommodate automobile, public transit, and non-motorized modes of travel; and encourage the preservation of the rural and agricultural character of the community.	The Existing Alignment Alternative (Preferred Alternative) would improve traffic circulation along SR-76, improve operational characteristics, and would be designed to follow the existing SR-76 alignment. Implementation of the proposed project is projected to improve the LOS along SR-76 between South Mission Road and I-15. Additionally, improvements to traffic circulation along SR-76 between South Mission Road and I-15 would likely reduce congestion along other local major roads such as South Mission Road, Gird Road, and Old Highway 395, as motorists would not need to use alternate routes to avoid congestion along SR-76. The Southern Alignment Alternative would improve traffic circulation along SR-76 and improve operational characteristics. However, it would not be designed to follow the existing SR-76 alignment. The Park and Ride feature of both build alternatives would facilitate transit usage and promote carpooling, thereby reducing the number of single occupancy vehicles traveling on I-15 and SR-76 and further reducing traffic congestion both locally and regionally. Additionally, the roadway shoulders of each alternative could be used by both pedestrians and bicyclists. The No Build Alternative would not improve traffic circulation along SR-76 and would not improve operational characteristics. Furthermore, the No Build Alternative would not reduce congestion along other local major roads such as South Mission Road, Gird Road, and Old Highway 395, as motorists would likely use these alternate routes to avoid congestion along SR-76. The No Build Alternative would not improve the existing Park and Ride	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this objective and issue of the Fallbrook Community Plan. The Southern Alignment Alternative would be inconsistent with this objective and issue of the Fallbrook Community Plan since it would not be designed to follow the existing SR-76 alignment. The No Build Alternative would be inconsistent with this goal because it would not accomplish the community plan objective of allowing safe and efficient travel throughout the community. It would also not adequately accommodate improved public transit, and non-motorized modes of travel.

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	facility. Therefore, there would not be a corresponding increase in transit usage or carpooling or the associated reduction in the number of single occupancy vehicles traveling on I-15 and SR-76. Traffic congestion would be expected to increase, both locally and regionally. Additionally, there would not be an improvement of roadway shoulders for use by both pedestrians and bicyclists.	
I-15 Corridor Subregional Plan		
The plan is intended to promote orderly development, protect environmental and human-made resources, and implement the County's objectives for growth management and the structure of government for the subregion.	Both build alternatives would improve traffic circulation along SR-76 and improve operational characteristics. Impacts to environmental resources would be mitigated at ratios negotiated with the relevant resource agencies. Wherever possible, encroachment into sensitive habitats and/or habitats that could support sensitive species has been kept to a minimum. The proposed project would strive to be consistent with the Draft NCMSCP and would not preclude development of open space areas associated with the San Luis Rey River Park. Wildlife crossings have been proposed for both build alternatives.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with the I-15 Corridor Subregional Plan. The Southern Alignment Alternative would be consistent with the I-15 Corridor Subregional Plan. The No Build Alternative would be inconsistent with the I-15 Corridor Subregional Plan because there would not be any improvements to the I-15 corridor at the intersection with SR-76.
Community Trails Master Plan		
Goal 1: Provide a system of "non-motorized trails" (trails) that meet the needs of County residents by providing scenic and enjoyable experiences that include connections with other public facilities, such as parks, open spaces, trail systems of other jurisdictions, points of interest, and/or sites with educational or historical significance. Goal 2: Initiate and sustain an effective and efficient trail system using the Regional Trails Map contained within the General Plan and a Community Trails Master Plan as the basis for future planning, coordination, implementation, and management of the trail system.	The Community Trails Master Plan proposes implementation of two main community trails that would be implemented as a part of the San Luis Rey River Park Master Plan that could be affected by either build alternative. However, the proposed project and the San Luis Rey River Park are being developed concurrently, and Caltrans and the County of San Diego Department of Parks and Recreation are coordinating the development of both projects. This coordination will include finalizing locations for planned trails within the San Luis Rey River Park based on the final alignment of the proposed project. Approximately 97 linear feet of the planned San Luis Rey River North Trail and 273 linear feet of the planned San Luis Rey River South Trail would be permanently impacted by the Existing Alignment Alternative. Approximately 273 linear feet of the planned San Luis Rey River South Trail would be permanently impacted by the Southern Alignment Alternative. However, because the planned trail	The Existing Alignment Alternative (Preferred Alternative) would be consistent with these goals. The Southern Alignment Alternative would be consistent with these goals. The No Build Alternative would be consistent with these goals.

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	locations are not specifically defined, ample area within the planned park exists to accommodate the minor trail alignment shifts caused by either alternative for SR-76. The County has recently concurred on a de minimis finding that confirms potential impacts within the proposed park would not adversely affect the activities, features, and attributes of those areas. Negotiations with the County of San Diego Department of Parks and Recreation are ongoing to develop an MOU coordinating development of the proposed San Luis Rey River Park and SR-76. Impacts to parks and recreational facilities would not be substantial. The No Build Alternative would not have an adverse effect on the Community Trails Master Plan. Caltrans and the County would coordinate to ensure that final design of proposed trails would be compatible with the existing alignment of SR-76.	
County of San Diego San Luis Rey River Park Master Plan		
San Luis Rey River Park Vision: The [San Luis Rey River Park] Master Plan outlines the creation of a dynamic open space legacy balancing recreation and preservation/ restoration/ interpretation of the San Luis Rey River's outstanding biological and cultural resources. .	The San Luis Rey River Park was designed to accommodate the planned widening of SR-76 along its existing alignment. The County Park PEIR discusses areas that have been set aside within the proposed park sites for the proposed SR-76 widening. Final plans for the park's open space will be completed after the final alignment of the proposed project has been determined. Biological mitigation associated with the proposed project would preserve and restore large natural areas and improve wildlife crossings. The No Build Alternative would preserve the rural character of the area and would not have an adverse effect on the County of San Diego's San Luis Rey River Park. Caltrans and the County would coordinate to ensure that final design of the proposed park would be compatible with the existing alignment of SR-76.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this vision for the San Luis Rey River Park. The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be consistent with this goal.
Multi-use Trail Network: A network of multi-use trails will provide thorough access to the park's diverse resources and amenities. Trail bridges will allow year-round circulation within the river corridor while (a) trail underpass(es) enhance connectivity between riparian and upland areas.	Both alternative alignments are designed to accommodate trail crossings at proposed signalized intersections and would include a multi-use trail underpass. The No Build Alternative would not have an adverse effect on planned multi-use trails for the County of San	The Existing Alignment Alternative (Preferred Alternative) would be consistent with planned multi-use trails. The Southern Alignment Alternative would be consistent with planned multi-use trails.

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	Diego's San Luis Rey River Park.	The No Build Alternative would be consistent with planned multi-use trails.
Ongoing Coordination: As plans for the San Luis Rey River Park continue to evolve, it is important that the County continues to coordinate with Caltrans regarding the expansion of SR-76. It is the County's intention that Caltrans' required mitigation will be integrated into the open space portion of the San Luis Rey River Park.	The proposed highway project and the San Luis Rey River Park are being developed concurrently, and Caltrans and the County of San Diego Department of Parks and Recreation are coordinating the development of both projects. Both alternative alignments are designed to integrate mitigation from impacts to natural resources of the SR-76 expansion in the open space portion of the San Luis Rey River Park. The No Build Alternative would not have an adverse effect on continued planning and implementation of the San Luis Rey River Park.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with the San Luis Rey River Park. The Southern Alignment Alternative would be consistent with the San Luis Rey River Park. The No Build Alternative would be consistent with the San Luis Rey River Park, though enhancement of disturbed habitat within the park through mitigation of impacts from SR-76 expansion would not occur.
SANDAG's 2030 San Diego Regional Transportation Plan: Pathways for the Future (2030 RTP)		
The RTP lays out a regional transportation system to enable current and future planning efforts to enhance quality of life. The RTP is a part of the RCP and identifies specific transportation needs throughout the next 25 years that would enhance the land use/transportation connection in development within the San Diego region.	The proposed project is included in the current 2030 RTP as SR-76 East: From Mission Road to I-15 – widen from 2 to 4 lanes. The design concept and scope of the proposed project are consistent with the project description in the 2030 RTP and the assumptions in the SANDAG regional emissions analysis. Therefore, the project is assumed to conform to the SIP and no adverse regional or local air quality impact would occur as a result of the project. The No Build Alternative would not be consistent with the RTP and could result in adverse effects to regional air quality through increased congestion as it would not meet 2030 transportation needs.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be inconsistent with this goal as it would not meet 2030 transportation needs.
SANDAG's 2010 Regional Transportation Improvement Program (2010 RTIP)		
The RTIP was developed to implement the San Diego region's overall transportation strategy for providing mobility and improving the efficiency and safety of the transportation system. The 2010 RTIP aims to reduce transportation-related air pollution in an effort to attain federal and state air quality standards for the San Diego region. The 2010 RTIP also incrementally implements the latest update to the RTP.	The proposed project is included in the current 2010 RTIP as MPO ID CAL29B (SR-76 East: From Mission Road to I-15 – widen from 2 to 4 lanes). The design concept and scope of the proposed project are consistent with the project description in the 2010 RTIP and the assumptions in the SANDAG regional emissions analysis. Therefore, the project conforms to the SIP and no adverse regional or local air quality impact would occur as a result of the project. The No Build Alternative would not be consistent with the RTP and could result in adverse effects to regional air quality through increased congestion	The Existing Alignment Alternative (Preferred Alternative) would be consistent with the 2010 RTIP. The Southern Alignment Alternative would be consistent with the 2010 RTIP. The No Build Alternative would be inconsistent with this goal because it would not improve the efficiency or safety of the transportation system and would not result in reductions to transportation-related air pollution.

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	as it would not meet 2010 transportation needs.	
Multiple Species Conservation Program North County Subregion (Draft February 2009)		
The Draft NCMSCP is a regional habitat conservation plan consistent with the state NCCP Act of 1992.	The Draft NCMSCP acknowledges the proposed project in the Draft NCMSCP and states that the County coordinated planning efforts for the proposed project into development of the Draft NCMSCP. The No Build Alternative would not result in an adverse effect to the Draft NCMSCP.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with the NCMSCP. The Southern Alignment Alternative would be consistent with the NCMSCP. The No Build Alternative would be consistent with the NCMSCP.
San Diego County General Plan (Adopted August 3, 2011)		
Land Use Element Goal LU-2: Maintenance of the County's Rural Character. Conservation and enhancement of the unincorporated County's varied communities, rural setting, and character.	Both build alternatives would preserve the natural environment through mitigation of resources at ratios negotiated with the relevant resource agencies. However, both build alternatives would reduce the rural character of the County of San Diego. The Existing Alignment Alternative (Preferred Alternative) would reduce the rural character by increasing the pavement hardscape of SR-76 and altering the visual landscape. The Southern Alignment Alternative would reduce the rural character by introducing a new roadway into an undeveloped area and displacing Vessels Stallion Farm. The No Build Alternative would preserve the natural environment and the rural character of the Bonsall and Fallbrook communities along the San Luis Rey River corridor. It would not, however, improve traffic circulation along SR-76 or improve operational characteristics.	The Existing Alignment Alternative (Preferred Alternative) would cause increased areas of pavement and hardscape along SR-76 and alteration of the visual landscape. However, the project would be consistent with the Mobility Element of the County General Plan. The Southern Alignment Alternative would be inconsistent with this goal due to the conversion of undeveloped land and displacement of Vessels Stallion Farm. However, the project would be consistent with the Mobility Element of the County General Plan. The No Build Alternative would be consistent with this goal.
Land Use Element Policy LU-12.2: Maintenance of Adequate Services. Require development to mitigate significant impacts to existing service levels of public facilities or services for existing residents and businesses. Provide improvements for Mobility Element roads in accordance with the Mobility Element Network Appendix matrices. Which may result in ultimate build-out conditions that achieve an improved LOS but do not achieve a LOS of D or better.	Both build alternatives would improve SR-76 in accordance with the Mobility Element and enable planned development to occur in accordance with adopted land use plans of the San Diego County General Plan and the Bonsall and Fallbrook community plans. The No Build Alternative would preserve the natural environment and the rural character of the Bonsall and Fallbrook communities along the San Luis Rey River corridor. It would not, however, improve traffic circulation	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this policy. The Southern Alignment Alternative would be consistent with this policy. The No Build Alternative would be inconsistent with this policy because it would not provide improvements to SR-76 in accordance with the Mobility Element.

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	along SR-76 or improve operational characteristics.	
Mobility Element Goal M-1: Balanced Road Network. A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities. Goal M-2: Responding to Physical Constraints and Preservation Goals. A road network that provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns, while supporting other General Plan goals such as providing environmental protections and enhancing community character. Goal M-4: Safe and Compatible Roads. Roads designed to be safe for all users and compatible with their context. Goal M-5: Safe and Efficient Multi-Modal Transportation System. A multi-modal transportation system that provides for the safe, accessible, convenient, and efficient movement of people and goods within the unincorporated County. Goal M-10: Parking for Community Needs. Parking regulations that serve community needs and enhance community character and cohesion. Goal M-11: Bicycle and Pedestrian Facilities. Bicycle and pedestrian networks and facilities that provide safe, efficient, and attractive mobility options as well as recreational opportunities for County residents.	Both build alternatives would improve traffic circulation along SR-76 and improve operational characteristics. This would meet the needs of an efficient road network that balances regional travel needs with the travel requirements and preferences of local communities and provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns. Both build alternatives would provide operational improvements for all users and be compatible with their context. Enhancement of the existing Park and Ride facility would increase the availability of parking. The roadway shoulders of each alternative could be used by both pedestrians and bicyclists. The proposed project would preserve the natural environment through mitigation of resources at ratios negotiated with the relevant resource agencies. The No Build Alternative would preserve the natural environment. It would not, however, improve traffic circulation along SR-76 and would not improve operational characteristics. Therefore, the No Build Alternative would not meet the needs of an efficient road network that balances regional travel needs with the travel requirements and preferences of local communities and provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns. The Park and Ride facility would not be expanded to increase the availability of parking. The roadway shoulders would not be expanded for use by both pedestrians and bicyclists.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be inconsistent with this goal because it would not result in a safe and efficient road network that balances regional travel needs with the travel requirements and preferences of the local communities.
Conservation and Open Space Element Goal COS-1: Inter-Connected Preserve System. A regionally managed, inter-connected preserve system that embodies the regional biological diversity of the County of San Diego. Goal COS-2: Sustainability of the Natural Environment. Sustainable ecosystems with long-term viability to maintain natural processes, sensitive lands, and sensitive as well as common species, coupled with	Both build alternatives would result in biological impacts. However, impacts to biological resources would be mitigated at ratios negotiated with the relevant resource agencies. Wherever possible, encroachment into sensitive habitats and/or habitats that could support sensitive species has been kept to a minimum. The proposed project would strive to be consistent with the Draft NCMSCP and would not preclude development of open space areas associated with the San Luis Rey River Park. Wildlife crossings have been proposed for both build	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be consistent with this goal.

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sustainable growth and development. Goal COS-3: Protection and Enhancement. Wetlands that are restored and enhanced and protected from adverse impacts.	alternatives. The No Build Alternative would not result in adverse effects to biological resources and would be consistent with the Draft NCMSCP. The No Build Alternative would also not preclude development of open space areas associated with the San Luis Rey River Park. However, no wildlife crossings would be constructed beneath SR-76.	
Conservation and Open Space Element Goal COS-5: Protection and Maintenance of Water Resources. Protection and maintenance of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage systems to maintain high-quality water resources.	Both build alternatives were designed to minimize impacts to the river and floodplain. In efforts to minimize or avoid some of its adverse impacts to the San Luis Rey River, the proposed highway was located as far away from the river as possible. Complete avoidance is not practicable. Both build alternatives would be assessed for the inclusion of temporary pollution prevention and treatment BMPs to ensure that any potential for discharge of contaminants would be minimized. The total floodplain encroachment for the Existing Alignment Alternative (Preferred Alternative) is 55.9 acres, which would result in a maximum increase in WSE of the 100-year floodplain of 3.0 inches. Selection of the Existing Alignment Alternative (Preferred Alternative) would not result in a substantial floodplain encroachment. The Southern Alignment Alternative would have a greater impact to the 100-year floodplain. The total floodplain encroachment for the Southern Alignment Alternative is 79.2 acres, which would result in a maximum increase in WSE of the 100-year floodplain of 6.7 inches. This increase in the WSE for the Southern Alignment Alternative would be considered a substantial floodplain encroachment. The No Build Alternative would not result in any adverse effects to the river and floodplain. However, portions of the existing roadway would remain within the 100-year floodplain.	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal. The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be consistent with this goal.
Conservation and Open Space Element Goal COS-6: Sustainable Agricultural	The Existing Alignment Alternative (Preferred Alternative) would convert 71.2 acres (0.08 percent of total County farmland) of agricultural soils.	The Existing Alignment Alternative (Preferred Alternative) would impact agricultural and rural lands. However, the project

Relevant Key Goals and Policies	Alternative Considerations	Alternative Consistency
Industry. A viable and long-term agricultural industry and sustainable agricultural land uses in the County of San Diego that serve as a beneficial resource and contributor to the County's rural character and open space network.	The farmland conversion would be longitudinal and would not preclude the agricultural industry continuing in Bonsall. However, the Mobility Network map of the County General Plan shows the widening of SR-76 along its existing alignment from the Oceanside boundary to I-15. Therefore, the County General Plan anticipates the conversion of existing agricultural lands to accommodate the widening of SR-76. The Southern Alignment Alternative would directly convert 82.8 acres (0.09 percent of total County farmland) of actively farmed lands and agricultural soils. The farmland conversion would be longitudinal and would not preclude the agricultural industry continuing in Bonsall. The No Build Alternative would not result in any adverse effects to agricultural resources.	would be consistent with the Mobility Element of the County General Plan and, therefore, it would be consistent with the Conservation and Opens Space Element of the County General Plan since general plans are required by the California Planning and Zoning Law to be internally consistent. The Southern Alignment Alternative would be inconsistent with this goal since it would not follow the existing SR-76 alignment as shown on the Mobility Element of the County General Plan. The No Build Alternative would be consistent with this goal.
<u>Conservation and Open Space Element s</u> Goal COS-11: Preservation of Scenic Resources. Preservation of scenic resources, including vistas of important natural and unique features, where visual impacts of development are minimized.	The Existing Alignment Alternative (Preferred Alternative) would have moderate to moderately high-level impacts to the existing visual landscape due to landform modification, introduction of new paved surfaces, and removal of existing vegetation. However, the Mobility Network map of the County General Plan shows the widening of SR-76 along its existing alignment from the Oceanside boundary to I-15. Therefore, the County General Plan anticipates impacts to scenic resources associated with the widening of SR-76. The Southern Alignment Alternative would have moderately high- to high-level impacts to the existing visual landscape due to landform modification, introduction of new paved surfaces, and removal of existing vegetation. The Southern Alignment Alternative would further adversely alter the visual landscape by introducing a new roadway into an undeveloped area. The No Build Alternative would not result in any adverse impacts to visual resources.	The Existing Alignment Alternative (Preferred Alternative) would cause landform modification, introduction of new paved surfaces, and removal of existing vegetation. However, the project would also mitigate impacts to natural features by restoring disturbed areas to native habitats and would be consistent with the Mobility Element of the County General Plan. The Southern Alignment Alternative would be inconsistent with this goal due to due to landform modification, introduction of new paved surfaces, removal of existing vegetation, and the introduction of a new roadway into an undeveloped area. However, this alternative would also mitigate impacts to natural features by restoring disturbed areas to native habitats. The No Build Alternative would be consistent with this goal.
<u>Conservation and Open Space Element</u> Goal COS-21: Park and Recreation	The proposed project and the San Luis Rey River Park are being developed concurrently, and Caltrans and the County of San Diego	The Existing Alignment Alternative (Preferred Alternative) would be consistent with this goal.

Relevant Key Goals and Policies	Alternative Considerations	Alternative Consistency
Facilities. Parks and recreation facilities that enhance the quality of life and meet the diverse active and passive recreational needs of County residents and visitors, protect natural resources, and foster an awareness of local history, with approximately 10 acres of local parks and 15 acres of regional parks provided for every 1,000 persons in the unincorporated County. Goal COS-22: Parks and Recreation Services. High-quality parks and recreation programs that promote the health and well-being of County residents while meeting the needs of a diverse and growing population.	Department of Parks and Recreation are coordinating the development of both projects. The County Park PEIR discusses areas that have been set aside within the proposed park sites for the proposed SR-76 roadway alignments. The County is dedicated to ensuring that final design of the proposed park would be compatible with the proposed improvements to SR-76. The County has recently concurred with a de minimis finding that encroachments into future parkland would not affect the uses of those areas. Therefore, neither build alternative would have substantial impacts to any existing or designated parks or recreational facilities. The No Build Alternative would not impact any existing designated parks or recreational facilities. Caltrans would continue to coordinate with the County of San Diego Department of Parks and Recreation regarding the relationship between the San Luis Rey River Park and the existing SR-76 roadway alignment.	The Southern Alignment Alternative would be consistent with this goal. The No Build Alternative would be consistent with this goal.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would be consistent with all of the goals and policies in the land use, mobility, and conservation and open space elements of the Bonsall Community Plan, Fallbrook Community Plan, and San Diego County General Plan. SR-76 is a transportation improvement that is designated in each of the adopted County plans. It would also be consistent with the 2030 RTP, the recently adopted 2050 RTP, the San Luis Rey River Park Master Plan, and the San Diego County Community Trails Master Plan. A more detailed discussion of these impacts is provided in Section 3.3, Parks and Recreational Facilities, and Section 3.6, Community Character and Cohesion. The Existing Alignment Alternative (Preferred Alternative) would also be inconsistent with the visual goals of these plans by altering the visual landscape of the project area. The Existing Alignment Alternative (Preferred Alternative) would convert actively farmed lands and agricultural soils to transportation uses, which is inconsistent with these plans' goals related to agricultural preservation.

Southern Alignment Alternative

The Southern Alignment Alternative would be inconsistent with some of the goals and policies in the land use, mobility, and conservation and open space elements of the Bonsall Community Plan, Fallbrook Community Plan, and San Diego County General Plan. The inconsistencies are related to preservation of rural character, agricultural lands, floodplains, sensitive habitat, and natural features and landforms; and with the goal that infrastructure be compatible with community character and minimize visual and environmental impacts. SR-76 is a transportation improvement that is designated in each of this adopted County plans. However, it would not be

fully consistent with the mobility elements of the community plans and the County General Plan since it would not be widened along its existing alignment as shown in the Mobility Network Plan maps. It would, however, be consistent with the 2030 RTP, the recently adopted 2050 RTP, San Luis Rey River Park Master Plan, and the San Diego County Community Trails Master Plan. A more detailed discussion of these impacts is provided in Section 3.3, Parks and Recreational Facilities, and Section 3.6, Community Character and Cohesion. The Southern Alignment Alternative would also result in greater alterations of the visual landscape of the project area compared to the Existing Alignment Alternative (Preferred Alternative) and would be inconsistent with the visual goals of these plans. The Southern Alignment Alternative would convert actively farmed lands and agricultural soils to transportation uses, which is inconsistent with these plans' goals related to agricultural preservation.

Both build alternatives would be consistent with most state, regional, and local plans and programs, but would be inconsistent with others. Of the 42 issues, goals, and policies in eight plans and programs considered, the Existing Alignment Alternative (Preferred Alternative) was found to be inconsistent with 10 issues, goals, and policies and the Southern Alignment Alternative was found to be inconsistent with 13 issues, goals, and policies. Inconsistencies with issues, goals, and policies can be acceptable, especially when they lead to project design features and mitigation measures that provide offsets. Examples are impacts to biological resources that are in conflict with biological preservation goals, but that result in biological mitigation areas where disturbed areas are restored to areas of native habitat. Another example would be the hydroseeding of areas of temporary disturbance to reduce erosion, improve water quality, and reduce visual impacts.

No Build Alternative

The No Build Alternative would not reduce existing traffic congestion and would allow traffic congestion to worsen in the future. Therefore, the No Build Alternative would not be consistent with goals in the Bonsall Community Plan, Fallbrook Community Plan, or San Diego County General Plan related to circulation. Similarly, the No Build Alternative would not be consistent with goals in the Bonsall Community Plan, Fallbrook Community Plan, or San Diego County General Plan related to preserving rural character because worsening traffic conditions over time would reduce the rural character of the surrounding area. The No Build Alternative would not be consistent with the 2030 RTP or 2010 RTIP, which identify the proposed project as a component of the County's future regional transportation system. However, the No Build Alternative would be consistent with the remaining goals of the Bonsall Community Plan, Fallbrook Community Plan, San Diego County General Plan, and other applicable plans.

3.2.3 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) is consistent with all of the goals and policies in the Bonsall Community Plan, Fallbrook Community Plan, and San Diego County General Plan; and with the mobility elements of all three plans by implementing a designated roadway improvement. Although the project would impact environmental resources described throughout the Final EIR/EIS measures are provided to avoid, reduce, or mitigate impacts to these environmental resources.

Southern Alignment Alternative

The Southern Alignment Alternative would have inconsistencies with some of the goals and policies in the Bonsall Community Plan, Fallbrook Community Plan, and San Diego County General Plan related to preservation of rural character, sensitive habitat, natural features and landforms, agricultural lands, and floodplains; and with the goal that infrastructure be compatible with community character and minimize visual and environmental impacts. The Southern Alignment Alternative would be consistent with the mobility elements of all three plans by improving circulation; however, it would not be fully consistent with the mobility elements of the community plans and the County General Plan since it would not be widened along its existing alignment as shown in the Mobility Network Plan maps. Although the Southern Alignment Alternative would impact environmental resources described throughout the Final EIR/EIS, measures are provided to avoid, reduce, or mitigate impacts to these environmental resources.

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3.3 PARKS AND RECREATIONAL FACILITIES

Please see Appendix B for a discussion of resources evaluated relative to the requirements of Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966. The CIA also addresses parks and recreational facilities.

3.3.1 Affected Environment

San Luis Rey Downs Golf Course and Country Club

The San Luis Rey Downs Golf Course and Country Club is a privately owned golf course and public resort located approximately 0.1 mile south of the intersection of SR-76 and South Mission Road. The resort contains a 6,750-yard 18-hole golf course, 10-acre driving range, country club, 26-room hotel lodge, restaurant, tennis club, private swimming pool, and pro golf shop. The country club has more than 1,000 members, largely from the nearby communities of Bonsall, Oceanside, and Vista, and more than 6,000 full rounds of golf are played at the facility annually.

Golf Club of California

The Golf Club of California is a privately owned 18-hole golf course and resort located adjacent to the existing SR-76 roadway at the intersection of SR-76 and Flowerwood Lane. In addition to the golf course, the Golf Club of California has practice facilities including a double-ended driving range, chipping area, and putting green. Other amenities at the Golf Club of California include a golf shop, men's and women's locker rooms, a business center, and meeting and dining rooms with various outdoor areas with covered lounges and fireplaces. The Golf Club of California also has ten 2,200-square-foot casitas available for members for overnight stays (Golf Club of California 2009).

Rancho Monserate Country Club and Mobile Home Center

The privately owned Rancho Monserate Country Club and Mobile Home Center is located approximately 0.3 mile south of the existing SR-76 roadway on the south side of the San Luis Rey River. The private 96-acre facility is a unique country club/golf center as it is owned and operated by the residents of Rancho Monserate who live on-site. The community is made up of approximately 232 mobile/manufactured country club homes and contains an 18-hole golf course. Other community amenities include a heated pool and spa, tennis facilities, and a community center used for meetings and dinner parties (Rancho Monserate Country Club 2008).

San Luis Rey River Park

The County of San Diego Department of Parks and Recreation has developed the San Luis Rey River Park Master Plan along the river corridor (Figure 3.3-1). The San Luis Rey River Park Master Plan establishes a framework for the creation of a park within the river valley from the Bonsall Bridge easterly to I-15 that includes passive and active recreation areas, a habitat preserve, and a multi-use trail system.

There is an existing informal "network" of trails within the river corridor. These trails are unofficial, are not formally designated as existing trails or maintained by the County of San Diego. Larger dirt trails are used for equestrian, mountain biking, and hiking purposes, and are

also not associated with any official trails plan. Use of these trails is a result of permission given by private property owners or trespassing (trespassing regulations on these trails is largely unenforced).

The San Luis Rey River Park Master Plan proposes to create a trail network that would entail the formalization of selected existing unofficial trails in the park's planning areas. These planned trails would be created or would incorporate portions of existing unofficial trails are dirt paths that have been created by residents walking through the area and are not associated with any official trails plan. Planned trails shown on the trails map (Figure 3.3-2) traverse both public and private land and are depicted as general alignments. The document defines "general alignment" as the general location of a future trail within a designated corridor, generally one-quarter mile wide. Two relevant trails include the planned San Luis Rey River North Trail and the planned San Luis Rey River South Trail, which would generally parallel either side of the river. The vast majority of unofficial trail segments not incorporated into the trails network would be closed and restored as preserved habitat.

Proposed active recreation areas are identified in the plan as Tier A sites, which would be developed as sports fields, parking and staging areas, interpretive gathering spaces, and gardens. Proposed passive recreation areas are identified in the plan as Tier B sites, and would consist of medium-low-density passive uses that would accommodate picnicking, bird watching, and resource interpretation. Tier B sites would be dispersed throughout the park along the park's trail network. The San Luis Rey River Park Master Plan intends to develop an eastern and western active recreation node totaling approximately 40 acres. The San Luis Rey River Park Master Plan also intends to preserve approximately 1,600 contiguous acres of open space along the river corridor that would provide habitat for several threatened and endangered species. The open space preserve would consist of all areas not dedicated to recreational use or multi-use trails. The planned trail network would provide access to the park's resources and amenities with multi-use trails. These trails would be linear, would weave through riparian and upland habitats, and would include trail bridges and underpasses where necessary to enhance connectivity between riparian and upland areas. The County of San Diego Board of Supervisors approved the San Luis Rey River Park Master Plan and certified the San Luis Rey River Park Master Plan Programmatic Environmental Impact Report on September 24, 2008. Project-specific plans and corresponding environmental documents would be prepared, pursuant to CEQA, for specific park improvements in the future.

Development of the San Luis Rey River Park may be constrained by existing land ownership. Several parcels have been acquired by the County and are being held for future park use. Sites owned by the County for future use as part of the San Luis Rey River Park are considered parkland under the California Park Preservation Act of 1971 (Public Resources Code § 5400 et seq.). Under this Act, a public agency that acquires public parkland for nonpark use must either pay compensation that is sufficient to acquire substantially equivalent substitute parkland or provide substitute parkland of comparable characteristics.

The USDOT Act of 1966 identifies properties subject to Section 4(f) as 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. When uses of 4(f) land would have no adverse effect on the protected resource, and the responsible official with jurisdiction over the resource agrees in writing, the 4(f) process is simplified. De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) resource. A de minimis impact finding is based on the degree or level of impact including any avoidance,

minimization, and mitigation or enhancement measures that are included in the project to address the Section 4(f) use. For Caltrans projects, when Caltrans determines that a transportation use of Section 4(f) property results in a de minimis impact on that property, no further Section 4(f) evaluation is required. The official(s) with jurisdiction over the property, in this case the County, must provide written concurrence.

Many sites within the proposed limits of the River Park are either privately owned or owned by a different public agency. The County of San Diego Department of Parks and Recreation would have to purchase these properties or enter into agreements with the property owners before the sites could be developed or incorporated as a part of the River Park. There are several publicly owned areas that could likely be incorporated into the San Luis Rey River Park, but currently the County of San Diego Department of Parks and Recreation does not have formalized agreements with the San Diego County Water Authority, Rainbow Municipal Water District, and Fallbrook Union High School District to incorporate land owned by these agencies. The locations of land owned by the County and other public agencies are shown in Figure 3.3-3.

Bonsall Preserve

The Bonsall Preserve is 27 acres of wetlands located at the northwest corner of the intersection of the existing SR-76 roadway and South Mission Road. The preserve is owned by the Fallbrook Land Conservancy, which purchased the preserve with funds from a California Transportation Commission's Environmental Enhancement and Mitigation grant. The Bonsall Preserve is largely inaccessible, although some areas are open to the public for bird watching. This limited access preserve includes a constructed walkway that is located near the intersection of South Mission Road and SR-76 that allows access for pedestrians.

3.3.2 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

San Luis Rey Downs Golf Course and Country Club

Implementation of the Existing Alignment Alternative (Preferred Alternative) would not require acquisition of land associated with the San Luis Rey Downs Golf Course and Country Club. This Club is separated from the proposed project by the San Luis Rey River, which is located north of the golf course. Access would not be changed as there would be no impact to Old River Road. The buffer of the San Luis Rey River would also prevent indirect impacts. Therefore, implementation of the Existing Alignment Alternative (Preferred Alternative) would not adversely affect the San Luis Rey Downs Golf Course and Country Club.

Golf Club of California

Implementation of the Existing Alignment Alternative (Preferred Alternative) would acquire 1.15 acres of undeveloped land associated with the Golf Club of California. This partial acquisition would occur on the south side of the parcel adjacent to the existing SR-76 roadway. However, this partial acquisition would not require land used for any of the holes on the golf course adjacent to the existing SR-76 roadway. Although the construction easement would be located adjacent to the holes nearest to the existing SR-76 roadway, construction activities would not preclude use of the holes. Access to the Golf Club of California would be changed, as Flowerwood Lane would be realigned to connect with Gird Road through a frontage road. Access to the Golf Club of California would remain available through this frontage road.

Therefore, implementation of the Existing Alignment Alternative (Preferred Alternative) would not adversely affect the Golf Club of California.

Rancho Monserate Country Club and Mobile Home Center

Implementation of the Existing Alignment Alternative (Preferred Alternative) would not require acquisition of land associated with the Rancho Monserate Country Club and Mobile Home Center. The Rancho Monserate Country Club and Mobile Home Center is separated from the proposed project by the San Luis Rey River, which is located north of the golf course. Access would not be changed as there would be no impact to Old Highway 395. Therefore, implementation of the Existing Alignment Alternative (Preferred Alternative) would not adversely affect the Rancho Monserate Country Club and Mobile Home Center.

San Luis Rey River Park

Caltrans and the County of San Diego Department of Parks and Recreation are coordinating the concurrent development of both the proposed project and the San Luis Rey River Park. This coordination would include finalizing locations of passive and active recreation areas, habitat preservation areas, and the multi-use trail system associated with the San Luis Rey River Park based on the final alignment of the Existing Alignment Alternative (Preferred Alternative). The County and Caltrans are dedicated to ensuring that final design of the proposed park would be compatible with the proposed improvements to SR-76. An MOU for their continued coordination is being developed.

Several parcels have been acquired by the County and are being held for future park use. Although not yet developed, by virtue of County ownership, these parcels are considered parkland under the Park Preservation Act. Approximately 10 acres within these parcels would be permanently impacted by the Existing Alignment Alternative (Preferred Alternative). No existing park facilities would be impacted. Consistent with the Park Preservation Act, Caltrans is coordinating with the County to ensure adequate land is identified for replacement parkland within the river valley.

Currently, pedestrians, bicyclists, and equestrians may use the shoulders of the existing SR-76 or the numerous existing trails within the river valley. The proposed project would neither preclude these uses nor alter the future trail users in the adjacent planned park. While minor realignments of the planned trails would be required, planned trails are identified in general corridors (typically one-quarter mile wide) and the minor shifts required would not alter what is envisioned in the San Luis Rey River Master Plan. In addition, Caltrans is coordinating with the County to incorporate trails within the right-of-way when possible. Direct trail impacts are depicted in Figure 3.3-2. Approximately 97 linear feet of the planned San Luis Rey River North Trail and 273 linear feet of the planned San Luis Rey River South Trail would be permanently impacted. The County of San Diego has recently concurred on a de minimis finding (Appendix L) that confirms potential impacts within the proposed park would not adversely affect the activities, features, and attributes of those areas.

Bonsall Preserve

Implementation of the Existing Alignment Alternative (Preferred Alternative) would not require acquisition of land associated with the Bonsall Preserve. Access would not be changed, as SR-76 would be reopened after construction and there would be no impact to South Mission

Road. Therefore, implementation of the Existing Alignment Alternative (Preferred Alternative) would not adversely affect the Bonsall Preserve.

Southern Alignment Alternative

San Luis Rey Downs Golf Course and Country Club

Although the Southern Alignment Alternative follows a more southerly path, the proposed alignment does not come any closer to the San Luis Rey Downs Golf Course and Country Club than the Existing Alignment Alternative (Preferred Alternative) does at its southernmost point. Implementation of the Southern Alignment Alternative would not acquire any land associated with the San Luis Rey Downs Golf Course and Country Club, which is separated from the proposed project by the San Luis Rey River. Access would not be changed as there would be no impact to Old River Road. Therefore, implementation of the Southern Alignment Alternative would not adversely affect the San Luis Rey Downs Golf Course and Country Club.

Rancho Monserate Country Club and Mobile Home Center

The Southern Alignment Alternative would follow the same path as the Existing Alignment Alternative (Preferred Alternative) north of the Rancho Monserate Country Club and Mobile Home Center. Therefore, impacts would be similar to those described above for the Existing Alignment Alternative (Preferred Alternative), and implementation of the Southern Alignment Alternative would not adversely affect the Rancho Monserate Country Club and Mobile Home Center.

San Luis Rey River Park

As described above for the Existing Alignment Alternative (Preferred Alternative), Caltrans and the County of San Diego Department of Parks and Recreation are coordinating the concurrent development of both the proposed project and the San Luis Rey River Park. This coordination would include finalizing locations of passive and active recreation areas, habitat preservation areas, and the multi-use trail system associated with the San Luis Rey River Park based on the final alignment of the alternative ultimately identified. The County and Caltrans are dedicated to ensuring that final design of the proposed park would be compatible with the proposed improvements to SR-76. An MOU for their continued coordination is being developed.

Several parcels have been acquired by the County and are being held for future park use. Although not yet developed, by virtue of County ownership, these parcels are considered parkland under the Park Preservation Act. Approximately 15 acres within these parcels would be permanently impacted by the Southern Alignment Alternative. No existing park facilities would be impacted. Consistent with the Park Preservation Act, Caltrans is coordinating with the County to ensure adequate land is identified for replacement parkland within the river valley.

Currently, pedestrians, bicyclists, and equestrians may use the shoulders of the existing SR-76 or the numerous existing trails within the river valley. The proposed project would neither preclude these uses nor alter the future trail users in the adjacent planned park. While minor realignments of the planned trails would be required, planned trails are identified in general corridors (typically one-quarter mile wide) and the minor shifts required would not alter what is envisioned in the San Luis Rey River Master Plan. In addition, Caltrans is coordinating with the County to incorporate trails within the right-of-way when possible. Direct trail impacts are depicted in Figure 3.3-2. Approximately 273 linear feet of the planned San Luis Rey River South

Trail would be permanently impacted. The County of San Diego has recently concurred on a de minimis finding (Appendix L) that confirms potential impacts within the proposed park would not adversely affect the activities, features, and attributes of those areas.

As a conventional highway, SR-76 is not an access-controlled facility, except when justified at spot locations. Reasonable access to the SR-76 roadway is not precluded from future park sites. Future requests for access to the roadway would be evaluated for consistency with the overall regional plan for SR-76.

Bonsall Preserve

Changes to the existing SR-76 roadway south of the Bonsall Preserve under the Southern Alignment Alternative would be the same as under the Existing Alignment Alternative (Preferred Alternative). Therefore, impacts would be similar to those described above for the Existing Alignment Alternative (Preferred Alternative). Implementation of the Southern Alignment Alternative would not adversely affect the Bonsall Preserve.

No Build Alternative

The No Build Alternative would not impact existing and/or planned parks and recreational facilities.

3.3.3 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative)

Efforts between Caltrans and the County of San Diego to work cooperatively to avoid land use compatibility conflicts with state transportation facilities are ongoing. Several alignment options were developed and reviewed in the design of the proposed project. Every attempt was made to minimize the effects to land use while still meeting project requirements. Wherever possible, the Existing Alignment Alternative (Preferred Alternative) was designed to follow the current SR-76 alignment to minimize impacts to park land use. This alignment has undergone several design iterations to avoid and/or minimize potential impacts to park land use.

As noted above, the project would impact a portion of publicly owned land that is considered parkland under the Park Preservation Act. Caltrans is coordinating with the County to identify adequate replacement land, consistent with this Act. Because the planned trail locations are not specifically defined, ample area within the planned park exists to accommodate the minor trail alignment shifts caused by either alternative for SR-76. The County has recently concurred on a de minimis finding that confirms potential impacts within the proposed park would not adversely affect the activities, features, and attributes of those areas. Negotiations with the County of San Diego Department of Parks and Recreation are ongoing to develop an MOU coordinating development of the proposed San Luis Rey River Park and SR-76. Impacts to parks and recreational facilities would not be substantial.

Southern Alignment Alternative

As with the Existing Alignment Alternative (Preferred Alternative), several alignment options were developed and reviewed in the design of the Southern Alignment Alternative. Every attempt was made to minimize the effects to land use while still meeting project requirements. Caltrans has worked cooperatively with the County of San Diego Department of Parks and

Recreation to avoid and/or minimize potential impacts to land use. As noted above, the project would impact a portion of publicly owned land that is considered parkland under the Park Preservation Act. Caltrans is coordinating with the County to identify adequate replacement land, consistent with this Act. Because the planned trail locations are not specifically defined, ample area within the planned park exists to accommodate the minor trail alignment shifts caused by either alternative for SR-76. The County has recently concurred on a de minimis finding that confirms potential impacts within the proposed park would not adversely affect the activities, features, and attributes of those areas. Negotiations with the County of San Diego Department of Parks and Recreation are ongoing to develop an MOU coordinating development of the proposed San Luis Rey River Park and SR-76. Impacts to parks and recreational facilities would not be substantial.

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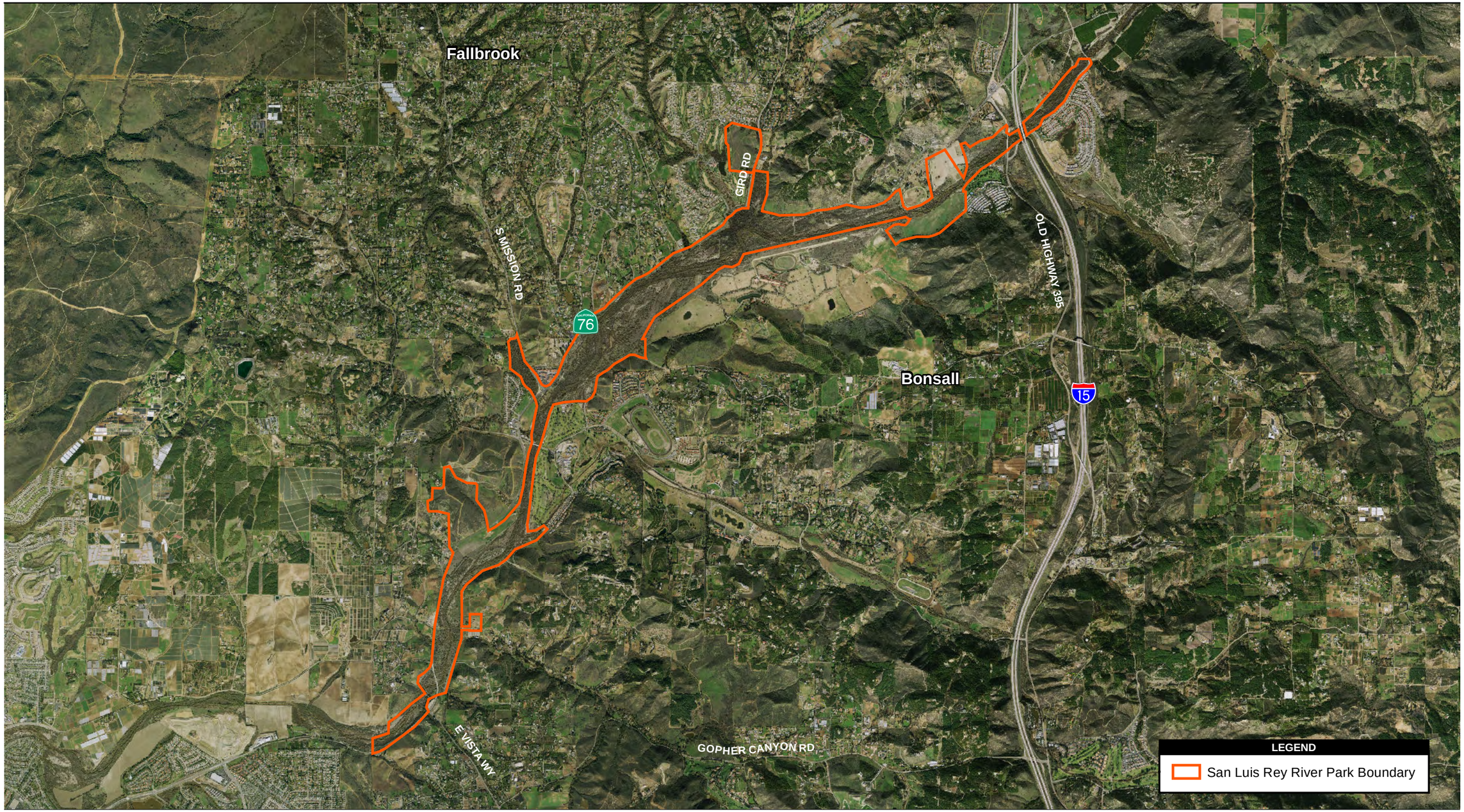
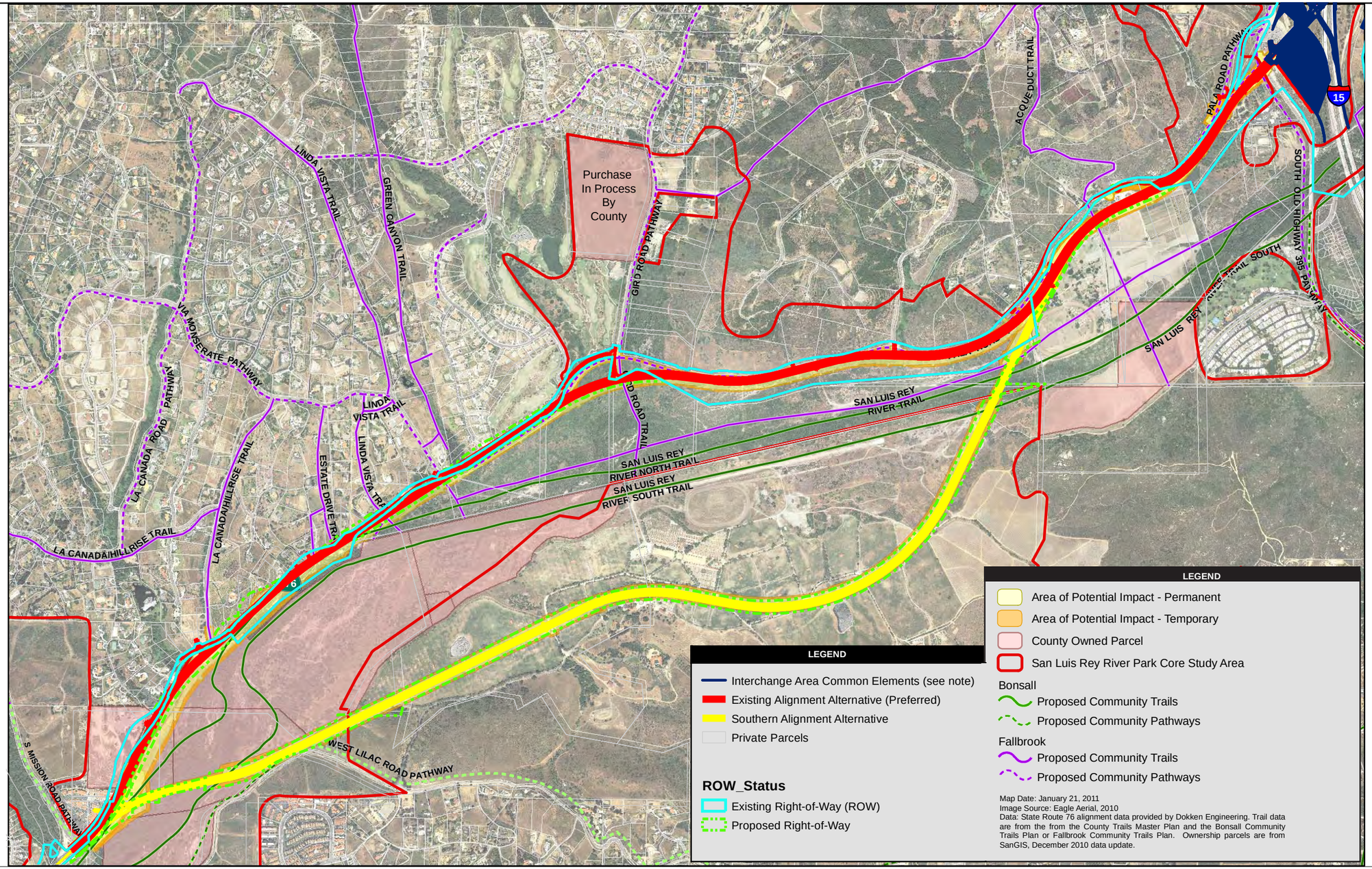


Source: DigitalGlobe 2008; SanGIS 2009

4,000 2,000 0 4,000 Feet

Scale: 1 = 48,000; 1 inch = 4,000 feet

Figure 3.3-1
San Luis Rey River Park
Proposed Boundaries



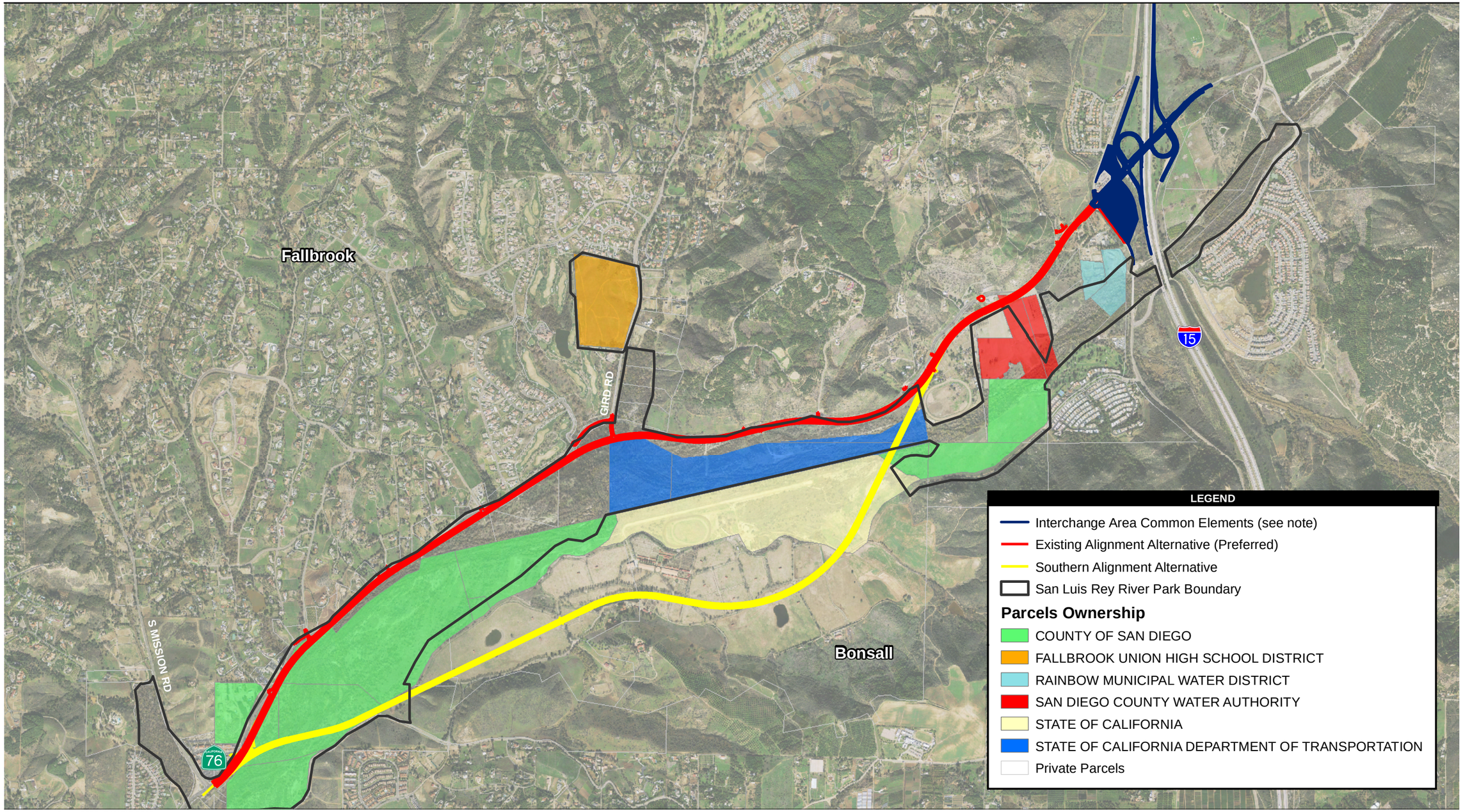
Source: CALTRANS 2011

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf Interchange) and 2.1-5 (Spread Diamond Interchange).

0 0.25 0.5 Miles

Figure 3.3-2

San Luis Rey River Park County Owned Parcels and Proposed Community Trails and Pathways



Source: DigitalGlobe 2008; SANGIS 2009

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.3-3
San Luis Rey River Park Publicly Owned Parcels Adjacent to the Proposed Project

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_03_3 SLRRP public owned.mxd, 10/9/2011, augellop

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3.4 GROWTH

The CIA, a separate technical study prepared in April 2010, serves as the basis for this analysis of growth impacts. It discusses whether the proposed improvements to SR-76 would result in otherwise unforeseen direct, indirect, or secondary growth, otherwise known as growth influence.

3.4.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the NEPA 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 project and at some time in the future. The CEQ regulations, 40 Code of Federal Regulations (CFR) 1508.8, refer to these consequences as secondary impacts. Secondary 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."

3.4.2 Affected Environment

Future population growth within the region has the potential to change the existing rural character of Bonsall and Fallbrook, as well as the region as a whole. The County of San Diego is the agency that approves development in northern San Diego County. SR-76 is the most direct transportation corridor between the rapidly growing, primarily residential communities of southwestern Riverside County and the employment centers of north coastal San Diego County. As a result of this setting, as well as development along the corridor, SR-76 has become a heavily used commuter corridor. Substantial increases in population are anticipated in the next 20 to 25 years for the cities and unincorporated northern parts of San Diego County, and the cities and unincorporated portion of southwestern Riverside County. Between 2004 and 2030, SANDAG has forecasted that population in the community of Fallbrook will grow by 32,539 people, or 68.6 percent. The community of Pauma is expected to increase by 9,065 people, or 147.1 percent, while the community of Valley Center is expected to increase by 25,089 people, or 134.0 percent. In aggregate, the population of the cities and communities of Fallbrook, Bonsall, Vista, Oceanside, San Marcos, Pauma, Valley Center, and Marine Corps Base Camp Pendleton are expected to increase by 164,795 people, or 36.3 percent from 2004 to 2030.

The population projection published by the Western Riverside Council of Governments, indicates that population growth within the southwestern Riverside County cities of Lake Elsinore, Murrieta, Perris, Temecula, Hemet, and San Jacinto between 2005 and 2030 would be 273,164 additional people, or a total of 74.5 percent growth.

Continued growth in northern San Diego County, including casino development and expansion along SR-76 east of I-15; extensive proposed development in the northeast quadrant of the I-15 interchange, including residences, commercial development, and a satellite Palomar Community College campus; and substantial growth in southwestern Riverside County would result in an increase in traffic on SR-76. Based on regional projections contained in the 2030

San Diego RTP, increases in growth and traffic are expected to continue into the foreseeable future. SANDAG, the City of Oceanside, the County of San Diego, and the unincorporated communities of Bonsall and Fallbrook have all expressed a desire to reduce traffic congestion, promote greater regional mobility, and improve user safety, while minimizing the effects of the proposed project on the environment and local communities.

The proposed project was identified in the 2030 San Diego RTP and approved by SANDAG in 2007. The project was also previously identified as a needed improvement by SANDAG in RTP documents dating as far back as 1994. Additionally, the proposed project is included in the revenue-constrained 2010 RTIP (adopted September 24, 2010).

Land surrounding the existing SR-76 roadway is characterized by its unique topography, which includes steep hillsides and the San Luis Rey River Valley, much of which is considered undevelopable land due to the steepness of the slopes, the river floodplain, and sensitive biological resources. Land south of the San Luis Rey River consists of undeveloped areas and agricultural land. A large portion of this land is associated with Vessels Stallion Farm, which is an approximately 2,000-acre property whose main operation is breeding race horses. Approximately 450 acres of the approximately 2,000-acre farm are devoted to the horses, while the remaining acres are used for beef cattle, citrus groves, flowers, vegetable crops, and avocado groves.

The project lies within a regional habitat conservation planning area under the NCCP program: the Draft NCMSCP in unincorporated San Diego County. This draft habitat conservation plan would protect certain biological resources within associated preserve boundaries and provide guidance to development within the boundaries.

3.4.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

The proposed project is in response to traffic congestion that has resulted from growth that has already occurred, is planned, or is projected to occur. Several development projects are currently proposed in the vicinity of the proposed project, with the majority proposed for areas east of the I-15 interchange at SR-76.

Approximately 1,200 homes are currently proposed east of the I-15 interchange. Other projects that are proposed east of the SR-76/I-15 interchange include the Gregory Canyon Landfill and the Palomar Community College satellite campus (North Education Center). The Pala Indian Tribe has plans to expand the Pala Casino located on the Pala Indian Reservation and approximately 5 miles east of the SR-76/I-15 interchange. The Pauma Band of Luiseño Mission Indians plans to expand its Casino Pauma located on the Pauma Indian Reservation into a resort along SR-76, approximately 10 miles east of the I-15 interchange. The Liberty Quarry is proposed for a site that is located in Riverside County, just north of the San Diego County line and west of I-15 near Rainbow Valley Boulevard. Finally, the Orange Grove Power Plant Project is a proposed 96-megawatt (MW) power plant project that is located approximately 3.5 miles east of I-15 on SR-76.

The projects described above have already been planned or are currently in the planning process to accommodate future growth anticipated in the region, independent of implementation of the proposed project. Furthermore, the proposed project is not a result of required mitigation for any planned or approved development project. Although the Existing Alignment Alternative

(Preferred Alternative) may facilitate growth at a faster rate for projects located at the SR-76/I-15 interchange and aid projects otherwise dependent on the interchange, it would not result in the development of projects that have not been planned previously and would only provide increased capacity to accommodate the growth associated with these projects.

Additionally, SANDAG's 2030 growth forecast projects that 99,000 housing units will be built outside of San Diego County. Many of these housing units will be located in southwestern Riverside County, where housing costs are generally lower than in northern San Diego County. However, growth in southwestern Riverside County is forecasted regardless of the project. Moreover, traffic from southwestern Riverside County is not solely responsible for the traffic on SR-76. Reducing the capacity and level of service on SR-76 without commensurate land use changes in southwestern Riverside County would not affect growth in a way that would reduce it or its environmental impacts associated with this project. This is because regional growth generally outpaces regional transportation improvements.

Land surrounding the Existing Alignment Alternative (Preferred Alternative) would serve to constrain development surrounding the existing SR-76 roadway. As described above, land surrounding the existing SR-76 roadway is characterized by steep hillsides and the San Luis Rey River Valley, much of which is considered undevelopable land due to the steepness of the slopes, the river floodplain, and sensitive biological resources. Therefore, the natural terrain places physical constraints on the amount of developable land available to accommodate future growth surrounding the existing SR-76 roadway. Additionally, revisions to the land use maps for Bonsall and Fallbrook in the San Diego County General Plan designate changes to land use. The Bonsall Community Plan has proposed changing the land use designation for the majority of parcels with a residential classification of one dwelling unit per 2 and 4 acres to semirural residential (SR-2) with one dwelling unit per 2, 4, and 8 acres, or semirural residential (SR-4) with one dwelling unit per 4, 8, and 16 acres. This land use conversion would decrease future development density throughout much of Bonsall. The highest residential density will remain located in the Country Town Area around the intersections of Olive Hill Road and South Mission Road. Residential land uses within Fallbrook surrounding the proposed project designated as one dwelling unit per 2 and 4 acres are also proposed to be converted to semirural residential (SR-2), with one dwelling unit per 2, 4, and 8 acres.

Overall, the Existing Alignment Alternative (Preferred Alternative) would not lead to unforeseen economic and/or population growth within the proposed project area, as it is responding to planned and projected growth in the region. The Existing Alignment Alternative (Preferred Alternative) would not directly tax community services or utilities because adequate planning policies and infrastructure financing tools are available. Furthermore, existing topographical restraints and revisions to the land use maps for Bonsall and Fallbrook in the adopted San Diego County General Plan and project review by the County of San Diego would serve to limit future growth in the area. Therefore, implementation of the Existing Alignment Alternative (Preferred Alternative) facilitates planned growth but is not anticipated to influence unplanned growth.

Southern Alignment Alternative

Similar to the Existing Alignment Alternative (Preferred Alternative), the Southern Alignment Alternative is responding to planned and projected growth in the region. However, the Southern Alignment Alternative would construct a new alignment south of the San Luis Rey River in an area with no existing transportation facility. Construction of this new alignment could facilitate access to an area that is currently rural in character and capacity, which could then be subject

to greater development pressure. Development constraints do exist in the area to curb future growth. The Southern Alignment Alternative is located within land proposed to be planned for very-low-density development, which is served by an existing local roadway network. As described in the CIA, County of San Diego General Plan land use designations allow for only very-low-density development along the proposed Southern Alignment Alternative (Figure 3.4-1). Therefore, the cost of infrastructure and public facilities improvements would be very high on a per-unit-acre basis. Additionally, the Southern Alignment Alternative would be located on land to be preserved by the County of San Diego's Draft NCMSCP and portions of the San Luis Rey River Park Master Plan south of the San Luis Rey River. Most of the preserve land is designated as a PAMA in the Draft NCMSCP (Figure 3.4-2).

Nonetheless, it is reasonably foreseeable that selection of the Southern Alignment Alternative could reduce the cost of development along the proposed alignment by introducing a new roadway. The potential relocation of Vessels Stallion Farm and other associated urban features in an undeveloped rural area could also increase the likelihood that land south of the San Luis Rey River could be developed in the future. Introduction of this new roadway would increase access to the area and increase the likelihood that land designated for preservation in the Draft NCMSCP could be developed. The Draft NCMSCP would continue to constrain potential future development within this area, but selection of the Southern Alignment Alternative could influence limited growth along this new roadway alignment. Therefore, the Southern Alignment Alternative may influence growth-related environmental effects by accelerating planned growth faster than mitigation land can be acquired in the Draft NCMSCP PAMA.

No Build Alternative

The No Build Alternative would not accommodate the planned growth for the project area because it would not support new areas for developments since it would not be expanded to accommodate traffic from proposed new developments.

3.4.4 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative)

As discussed above, growth within the project area would most likely occur without the proposed project and under either project alternative. Growth is anticipated in regional plans and projections and is considered an indirect issue related to the proposed project, some of which would not be minimized through alternate project features or design. Most of these growth influence impacts are unavoidable.

Growth is included within County, SANDAG, and Western Riverside Council of Governments projections. Caltrans would continue to coordinate with local jurisdictions with land use authority to encourage them to condition development approvals on the provision of adequate regional transportation facilities. Additionally, revisions to the land use maps for Bonsall and Fallbrook in the San Diego County General Plan would serve to limit future growth in the area. Mitigation measures would not be required for the Existing Alignment Alternative (Preferred Alternative) because it would not influence growth.

Southern Alignment Alternative

Implementation of the Southern Alignment Alternative could reduce the cost of development along the proposed alignment by introducing a new roadway. The potential relocation of Vessels

Stallion Farm and the introduction of a new roadway in an undeveloped, rural area would increase access to the area and increase the likelihood that land designated for preservation in the Draft NCMSCP could be developed.

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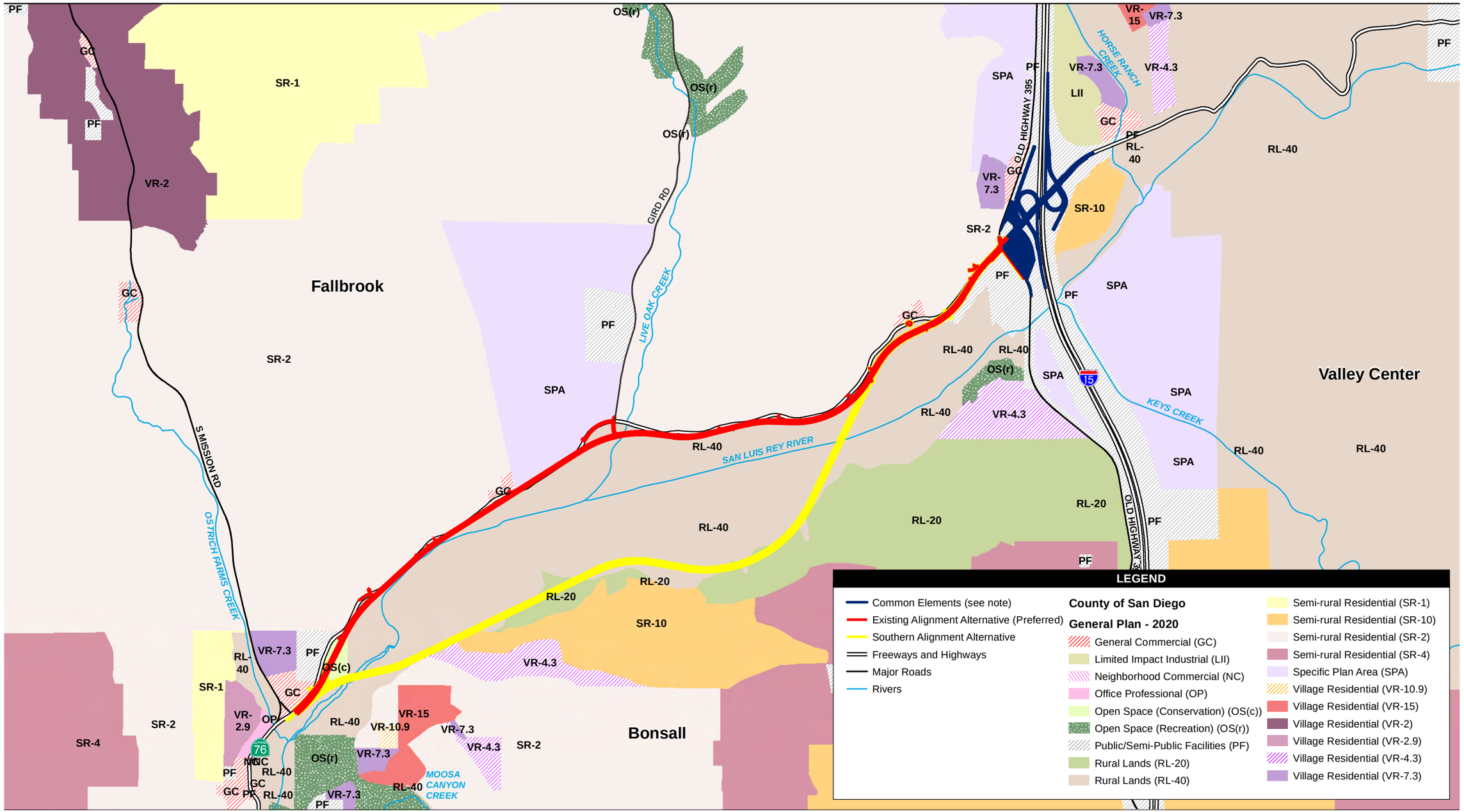


Source: SanGIS 2009; Dokken Engineering 2009

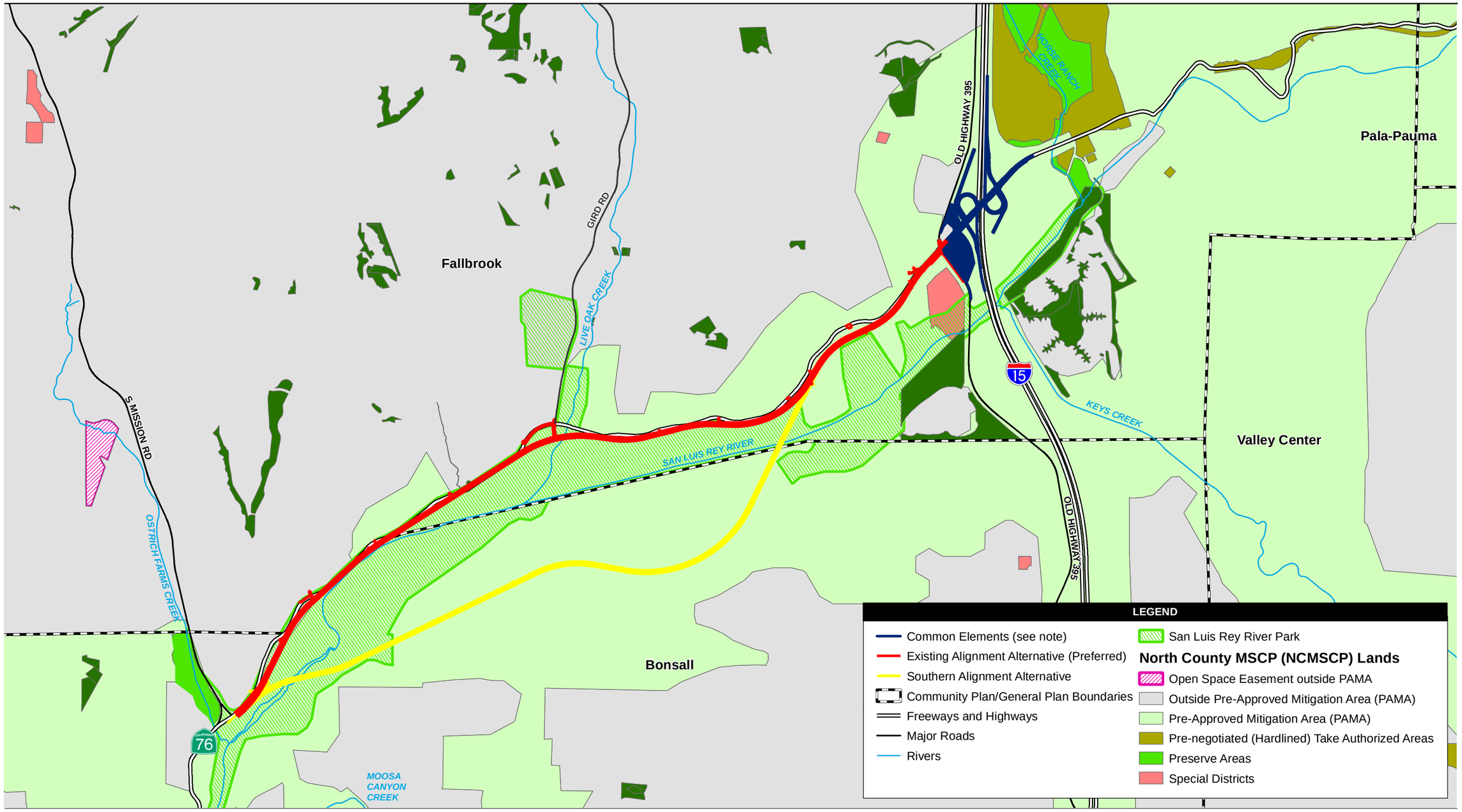
2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.4-1
Proposed Land Uses - County of San Diego General Plan - 2020

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_04_1_general_plan_2020.mxd, 10/24/2011, augellop



Source: SanGIS 2009; Dokken Engineering 2009

2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.4-2
North County MSCP and Conservation Lands

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_04_2_conservation_areas.mxd, 10/21/2011, augellop

3.5 FARMLANDS

The CIA, a separate technical study prepared in April 2010, serves as the basis for this analysis of farmland impacts.

3.5.1 Regulatory Setting

NEPA and the Farmland Protection Policy Act (FPPA, 7 USC 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

CEQA requires the review of projects that would convert California Land Conservation Act of 1965, commonly referred to as the Williamson Act) contract land to nonagricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

3.5.2 Affected Environment

Project Area Agriculture

Figure 3.5-1 shows the distribution of farmland surrounding the proposed project and classifies urban land as all developed areas that are not in agricultural production. Along SR-76, from South Mission Road to I-15, agricultural crops are generally located north of and adjacent to the eastern portion of the existing SR-76 roadway in areas that are predominately undeveloped. To the south of SR-76, from South Mission Road to I-15, agricultural uses are generally separated from the existing alignment by the San Luis Rey River and its associated riparian habitat. Large amounts of these agricultural lands are associated with Vessels Stallion Farm, substantial portions of which are used for beef cattle, citrus groves, flowers, vegetable crops, and avocado groves. Vessels Stallion Farm is located in the center of the project area, south of the current SR-76 roadway, and the San Luis Rey River.

Agricultural uses in the direct impact area include an orchard located at the intersection of SR-76 and Ramona Drive, the Kendall Palm Nursery, and Vessels Stallion Farm. Additionally, larger commercial agriculture lots such as the Pardee Tree Nursery and EuroAmerican Propagators are located outside the proposed project limits. The Pardee Tree Nursery operates on 300 acres and is located on Via Puerta Del Sol, north of the intersection of SR-76 and Olive Hill Road. It is the largest wholesale tree nursery in San Diego County. EuroAmerican Propagators, the second-largest producer of flower products in North America, operates on 57 acres of agricultural land in east Bonsall, near I-15 south of the proposed project on Aquaduct Road.

Williamson Act Lands

The California Land Conservation Act of 1965, or Williamson Act, enables private landowners to contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses (contract lands). Land owners can enroll parcels for a minimum of 10 years. In return for this guarantee by landowners, the government jurisdiction assesses taxes based on the agricultural value of the land rather than the market value, which typically results in a

substantial reduction in property taxes. Two properties within the study area of the proposed project are currently under Williamson Act contracts. Both of these properties are located north of the current SR-76 roadway. One of the properties is located east of Gird Road and is not adjacent to the existing SR-76 roadway. The other property is an orchard located toward the western end of the proposed project limits and is adjacent to the existing SR-76 roadway on the north side. The Existing Alignment Alternative (Preferred Alternative) would convert approximately 1.2 acres of Williamson Act contracted farmland located on the orchard at the intersection of SR-76 and Ramona Drive. The farmland conversion would be longitudinal and would not preclude the agricultural activities continuing on this parcel. The Southern Alignment Alternative would not convert Williamson Act contract lands.

3.5.3 Environmental Consequences

The following agricultural analysis is based on preparation of the NRCS Form NRCS-CPA-106 (Appendix H). Per NRCS, the quantification of impacts to farmland is based on the presence of soils within the proposed project corridor that meet the criteria for prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance, collectively referred to as agricultural soils. Table 3.5-1 summarizes potential impacts to farmland associated with the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative based on the completed NRCS form.

Table 3.5-1. Potential Farmland Conversion by Alternative

Alternative	Farmland Directly Converted	Percent of Farmland in County[1]	Prime and Unique Farmland	Farmland of Statewide or Local Importance	Farmland Conversion Impact Rating
Existing Alignment Alternative (Preferred Alternative)	118.3 acres	0.08%	31.0 acres	40.2 acres	120.49
Southern Alignment Alternative	108.7 acres	0.09%	63.1 acres	19.7 acres	144.28
No Build Alternative	0.0 acres	0.0%	0.0 acres	0.0 acres	N/A

[1] Percentage of farmland to be converted is based on amount of farmland defined by the Farmland Protection Policy Act statistics for the year 1996 in compliance with NRCS protocol.

As stipulated in 7 CFR 658.4 (c)(2), projects receiving a total score of less than 160 on the NRCS Form AD 106 need not be given further consideration for protection and no additional alternatives need to be evaluated. The farmland conversion impact ratings for the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative are below 160; further coordination with NRCS, including mitigation or development of additional alternatives, is not required.

Both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative are consistent with the San Diego County Code of Regulatory Ordinances, Section 63.403, Agricultural Land Conversion, Subdivision (b), which states that agricultural land may be converted to other uses or zones, specifically if the agricultural enterprise, activity, operation, facility, or appurtenances thereof obstruct the free passage or use of a highway. While the conversion of actively farmed lands and agricultural soils to transportation uses would be inconsistent with the Bonsall Community Plan, Fallbrook Community Plan, and San Diego County General Plan's goals related to agricultural preservation, the directly converted farmland and soils are a small portion of the agricultural uses in the County, and farms adjacent to the proposed alignments could continue operations. The farmland conversions are longitudinal and

would not preclude the agricultural activities continuing on the remainder of these parcels. The NRCS Form 106 indicates that there are 112,974 acres of farmable land within San Diego County with 91,812 acres of farmland as defined in FPPA. This resource is not considered a resource in decline and the agricultural industry in San Diego County would not be adversely impacted.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would directly convert both active farmland and agricultural soils that have the potential to support farming activities to transportation uses. The Existing Alignment Alternative (Preferred Alternative) would result in conversion of farmland on the orchard located at the intersection of SR-76 and Ramona Drive and the Kendall Palm Nursery. However, conversion of portions of these active farmlands would not preclude these farms from continuing agricultural production on the remainder of their properties in the future. Additionally, the Existing Alignment Alternative (Preferred Alternative) would convert 1.2 acres of Williamson Act contracted farmland, located on the orchard at the intersection of SR-76 and Ramona Drive. However, the farmland conversion would be longitudinal and the orchard would be able to continue agricultural activities on the remainder of the property.

Table 3.5-1 provides a summary of Form NRCS-CPA-106. A total of 31.0 acres of farmlands identified as “prime” and “unique” would be permanently converted to transportation uses by this alternative, and another 40.2 acres of farmlands identified as “statewide and locally important” would be permanently converted to transportation uses. A total of 118.3 acres of farmland would be directly converted to transportation uses through implementation of this alternative, which would account for approximately 0.08 percent of farmland within the County. As determined by NRCS, the total farmland conversion impact rating for the Existing Alignment Alternative (Preferred Alternative) is 120.49, which is less than the NRCS threshold of 160 points. Therefore, further coordination with NRCS is not required under NEPA (CFR 658.4 [c][2]) and impacts to farmland are not considered adverse.

Southern Alignment Alternative

The Southern Alignment Alternative would convert both active farmland and agricultural soils that have the potential to support farming activities into transportation uses where no transportation facility currently exists. Actively farmed lands and agricultural soils are located throughout the project area and portions of these parcels would be directly converted through implementation of this alternative. The Southern Alignment Alternative would result in conversion of farmland on Vessels Stallion Farm and the Kendall Palm Nursery. However, conversion of portions of these active farmlands would not preclude these farms from continuing agricultural production on the remainder of their properties in the future as there would be sufficient land to continue farming and continued access to the parcel. The Southern Alignment Alternative would not affect Williamson Act contract lands.

Table 3.5-1 provides a summary of NRCS Form NRCS-CPA-106. A total of 63.1 acres of farmlands identified as “prime” and “unique” would be permanently converted to transportation uses by this alignment. Another 19.7 acres of farmlands identified as “statewide and locally important” would be permanently converted to transportation uses. As shown in this table, a total of 108.7 acres of farmland would be directly converted to transportation uses through implementation of this alignment alternative, which would account for approximately 0.09 percent of farmland within the County. The total farmland conversion impact rating for the

Southern Alignment Alternative, as determined within the NRCS form, is 144.28, which is less than the NRCS threshold of 160 points. Therefore, further coordination with NRCS is not required under NEPA (CFR 658.4 [c][2]) and impacts to farmland are not considered adverse.

The Southern Alignment Alternative may also result in the indirect conversion of additional farmland to transportation uses. These indirect conversions may occur on farmland areas that the Southern Alignment Alternative would cut off from existing farmlands leaving remainder parcels. However, at this time, it is unknown how much, if any, of this land would not be farmable after construction of the Southern Alignment Alternative or if these remainders could be developed in the future. The final determination of whether these farmlands would be converted or not would depend on whether the current or future property owner determines these areas can continue to be farmed. Nevertheless, the potential indirect conversion of this farmland is accounted for in NRCS Form NRCS-CPA-106 in Part VI, line 6, where the Southern Alignment Alternative was given the highest score possible as a worst-case scenario (Appendix H).

No Build Alternative

The No Build Alternative would not impact farmland because the roadway would not be widened or realigned as proposed under the build alternatives.

3.5.4 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

Because the farmland conversion impact rating for both build alternatives is below 160, further coordination with NRCS, including mitigation or development of additional alternatives, is not required. The farmland conversions are longitudinal and would not preclude the agricultural activities continuing on the remainder of these parcels. The NRCS Form 106 indicates that there are 112,974 acres of farmable land within San Diego County with 91,812 acres of farmland as defined in FPPA. The Existing Alignment Alternative (Preferred Alternative) uses 0.08 percent of County farmland while the Southern Alignment Alternative uses 0.09 percent. This resource is not considered a resource in decline and the agricultural industry in San Diego County would not be adversely impacted. The farmland impacts are not adverse and they are not considered substantial.

The Morrison and Groves mitigation parcels from the SR-76 Melrose to South Mission project, the Vessels, Rincon, Tabata and Lilac Ranch parcels have been purchased for biological mitigation and are proposed for restoration and preservation from future development. The Tabata parcel was previously used as farmland. The Stacco, Time Out Holdings and Jeffries Ranch parcels have been purchased to comply with "net benefit" of the TransNet Ordinance, and would remain undeveloped. Morrison, Groves, Vessels, Rincon and Tabata, which include areas of farmland, are within the outline of the proposed county park and it has been proposed that those parcels become part of the park owned by the County of San Diego. In order to minimize impacts to residential areas along the northern edge of SR-76, some curve corrections have been re-designed to shift south slightly, which would leave portions of the old roadway pavement to be removed and those areas revegetated thereby minimizing the adverse impacts to farmland from the proposed project. During the right-of-way process, efforts would be made to add agricultural easements to the sales of these remnant farmland parcels or excess lands such as may be created at these areas of curve corrections, if any. These efforts may also maintain community character and cohesion since including larger mitigation parcels in areas

designated for preservation would prevent future unplanned commercial or other development within the rural area of Bonsall and Fallbrook.

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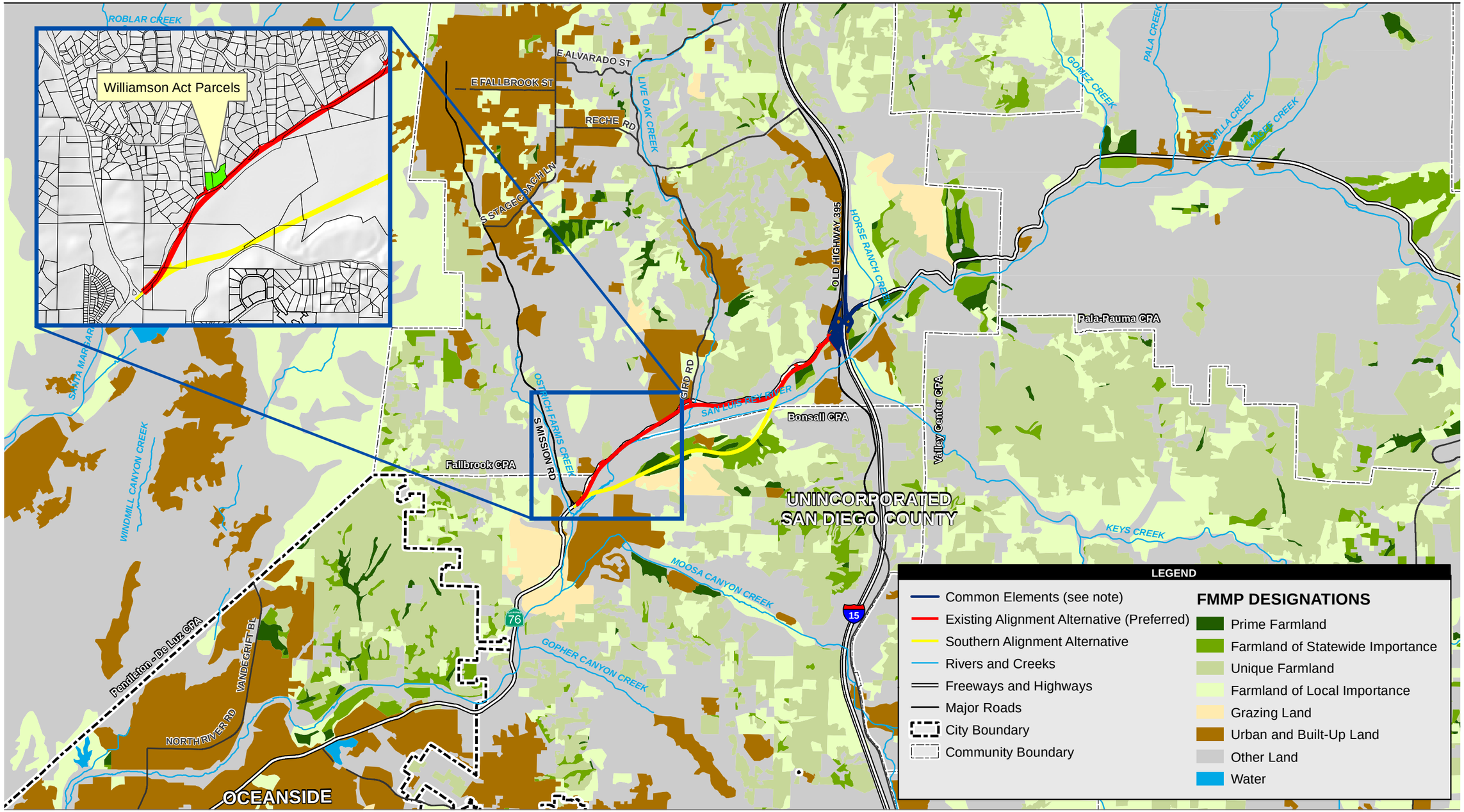

Source: SanGIS 2007, 2008; FMMP 2006; USGS 2000

7,000 3,500 0 7,000 Feet

Scale: 1 = 84,000; 1 inch = 7,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.5-1
FMMP Farmland Designations (2006)

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3.6 COMMUNITY CHARACTER AND COHESION

The CIA, a separate technical study prepared in April 2010, serves as the basis for this analysis of impacts to community character and cohesion and is incorporated by reference.

3.6.1 Regulatory Setting

NEPA of 1969, 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]). 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.

3.6.2 Affected Environment

The proposed project is located within a rural part of northern San Diego County within the unincorporated communities of Bonsall and Fallbrook. In particular, the unincorporated community of Bonsall is largely undeveloped and characterized by rolling hills, valleys, and drainage areas, resulting in predominately agricultural uses, large-lot single-family residences, and businesses. The portion of the unincorporated community of Fallbrook surrounding the proposed project is also considered largely rural and consists predominately of open space, agricultural uses, large-lot single-family residences, and some businesses. The Fallbrook town center area is located north of the proposed project.

Community character is the attributes of a community that make it special to its residents and visitors. It can be physical characteristics, such as landforms, natural resources, or a common architectural theme; types of land uses that residents and businesses rely on for their livelihood or enjoyment; or social characteristics such as leisure or recreational activities that residents enjoy in common. The community character of both Fallbrook and Bonsall has roots in the rural and agricultural origins of the communities. Fallbrook initially grew from a community of homesteaders based between Rancho Monserate and Rancho Santa Margarita in the late 1870s. Named after Fall Brook, Pennsylvania, the Fallbrook community had a post office and school by 1876, and platted streets and lots by 1885. Bonsall began as a small community south of Fallbrook and was named after a retired Methodist minister who developed a fruit tree nursery. At the turn of the 20th century, the community of Bonsall consisted of a post office, blacksmith shop, general store, hotel, and school. The community surrounding the schoolhouse contained large ranches and small farms. The Bonsall area became well known for its dairies, wine grapes, olives, avocados, thoroughbred horses, Hereford cattle, bees, and rabbitries. Both communities have grown substantially since their origins but have maintained their rural character. Both the Bonsall and Fallbrook community plans, which are included in the San Diego County General Plan, identify preservation of the existing rural and agricultural character of the communities as a high priority.

Residential development within Bonsall reflects the rural character of the community. The clustering of residential units is discouraged in order to maintain the rural quality of the community. As illustrated in the Bonsall Community Plan and observed in field visits, houses are generally placed far apart and have large footprints. This placement works "in harmony with the topography of the land." Houses on adjacent parcels are typically staggered in their location on the land to accomplish this goal. Houses in Bonsall use screening vegetation to provide privacy for residents and to screen houses and driveways. The small amount of higher density residential development that has been constructed or is allowed on the existing San Diego County General Plan land use map is concentrated around the San Luis Rey Downs Golf Course and Country Town Area.

Similarly, development within Fallbrook surrounding the proposed project reflects the rural character of the community. The Fallbrook Community Plan encourages the "use of open space, architecture, and building materials which are in harmony with the natural environment" to maintain and promote the existing character of the community. Large contiguous areas of undeveloped land and rural residential units and businesses dispersed along the length of the existing SR-76 roadway contribute to the rural nature of the area.

Community cohesion is the degree to which residents have a "sense of belonging" to their neighborhood; a level of commitment of the residents to the community; or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time. Cohesion refers to the degree of interaction among the individuals, groups, and institutions that make up a community.

Cohesive communities are associated with specific social characteristics, which may include long average lengths of residency, frequent personal contact, ethnic homogeneity, high levels of community activity, and shared goals. Both the Bonsall and Fallbrook communities show a high level of cohesiveness through a shared appreciation for a rural residential lifestyle, agriculture, equestrian facilities, schools, churches, other community groups, and recreation and shopping facilities.

3.6.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

It is anticipated that the design of the Existing Alignment Alternative (Preferred Alternative) would maintain or improve traffic congestion within the community and surrounding region. However, the Existing Alignment Alternative (Preferred Alternative) would widen the existing roadway and increase the carrying capacity of this portion of SR-76, which in turn could change the small-town image of the surrounding area.

The Existing Alignment Alternative (Preferred Alternative) would also affect the rural character of the communities by altering the visual landscape, although these changes to the existing landscape viewshed would be less pronounced in those areas where the Existing Alignment Alternative (Preferred Alternative) would follow the current SR-76 corridor. The Existing Alignment Alternative (Preferred Alternative) would moderately affect the existing visual landscape through landform modification to the steep hillsides along the north side of SR-76 between Gird Road and Old Highway 395, and the additional paving and construction of intersections and other segments of the Existing Alignment Alternative (Preferred Alternative) into areas immediately south of the current SR-76 corridor, which moves it closer to the river. The Existing Alignment Alternative (Preferred Alternative) would also require removal of a

variety of vegetation types, including mature trees and substantial masses of plant material, particularly where it incurs into steep slopes and the river basin due to modifications in roadway geometry and configuration. The proposed Park and Ride in the area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, was proposed in the draft EIR/EIS as a new Park and Ride facility and is evaluated in this document.This new facility is no longer proposed for the initial construction contract; instead, the existing Park and Ride facility would be expanded by 3 acres. The future southern Park and Ride facility would be constructed in an undeveloped area and would moderately change the visual landscape. The Visual Impact Assessment (VIA) prepared for the proposed project concluded that the Existing Alignment Alternative (Preferred Alternative) would have moderate to moderately high-level impacts to the existing landscape viewshed. Such changes to the visual landscape would reduce the rural character of the communities.

Sustainable disturbed areas would be planted with sustainable plant material and seed mixes that can be readily established with an extended plant establishment period and limited irrigation would be used. The plant palette would consist of native trees, shrubs, and ground covers that are similar in composition to the adjacent habitats and that reinforce the landscape concept and would be consistent with native vegetation on the steep hillsides [such as California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilulars*), bush sunflower (*Encelia californica*), toyon (*Heteromeles arbutifolia)*, lemonadeberry (*Rhus integrifolia*)] with rock outcroppings and along the riverbed [such as California sycamore (*Platanus recemosa*), western cottonwood (*Populus fremontii*), willow species (*Salix* spp.)] in order to maintain the pastoral landscape of the proposed project area.The Existing Alignment Alternative (Preferred Alternative) would result in noise increases that would exceed the noise abatement criteria (NAC) at four residences and two businesses, Section 3.9 Noise. Noise abatement was not found to be reasonable for any of the impacted residences. Abatement was not considered at the two businesses because human uses there are transitory and patrons would not be subjected to prolonged periods of increased noise exposure. Thus, this increase in noise would not substantially alter existing community character and cohesion.

Implementation of the Existing Alignment Alternative (Preferred Alternative) would require acquisition of 1.15 acres of land associated with the Golf Club of California. This partial acquisition would occur on the south side of the parcel adjacent to the existing SR-76 roadway. The Golf Club of California was developed in conjunction with the Sycamore Ranch residential community that surrounds the golf course; therefore, impacts to the Golf Club of California golf course would by extension be considered impacts to the Sycamore Ranch residential community as well. However, this partial acquisition would not acquire land used for any of the holes on the golf course adjacent to the existing SR-76 roadway. Although the construction easement would be located adjacent to the holes nearest to the existing SR-76 roadway, construction activities would not preclude use of the holes. Furthermore, the developers of the Golf Club of California golf course and Sycamore Ranch residential community coordinated closely with Caltrans while planning the golf course and community. As described in the Sycamore Ranch Golf Course Major Use Permit Final Subsequent EIR, the plans for the Golf Club of California golf course and Sycamore Ranch residential community anticipated ultimate widening of SR-76 by setting aside land to be incorporated into the widened roadway. Therefore, implementation of the Existing Alignment Alternative (Preferred Alternative) would not alter the existing community character and cohesion of the Golf Club of California and Sycamore Ranch residential community.

The Existing Alignment Alternative (Preferred Alternative) would be constructed along the current SR-76 roadway and therefore would not divide an established community.

Implementation of the Existing Alignment Alternative (Preferred Alternative) would not displace any residences, businesses, community recreational facilities, or community service facilities. No additional impacts to community character or cohesion are anticipated under operation of the Existing Alignment Alternative (Preferred Alternative).

Southern Alignment Alternative

It is anticipated that the design of the Southern Alignment Alternative would maintain or improve traffic congestion within the community and surrounding region by building a new SR-76 facility while the current roadway would remain in place. However, the Southern Alignment Alternative would affect the rural character of the community by altering the visual landscape. The Southern Alignment Alternative would introduce a new transportation corridor, coupled with new bridges, guardrails, drainage structures, and other associated construction components, into a largely undeveloped area south of the San Luis Rey River. The Park and Ride facility would be constructed in an undeveloped area and would moderately change the visual landscape as well. The VIA prepared for the proposed project concluded that the Southern Alignment Alternative would have moderately high- to high-level impacts to the existing landscape viewshed. Such changes to the visual landscape would reduce the rural character of the community and adversely impact the existing community character and cohesion.

Sustainable disturbed areas would be planted with sustainable plant material and seed mixes that can be readily established with an extended plant establishment period and limited irrigation would be used. The plant palette would consist of native trees, shrubs, and ground covers that are similar in composition to the adjacent habitats and that reinforce the landscape concept and would be consistent with native vegetation on the steep hillsides [such as California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilulars*), bush sunflower (*Encelia californica*), toyon (*Heteromeles arbutifolia)*, lemonadeberry (*Rhus integrifolia*)] with rock outcroppings and along the riverbed [such as California sycamore (*Platanus recemosa*), western cottonwood (*Populus fremontii*), willow species (*Salix* spp.)] in order to maintain the pastoral landscape of the proposed project area.

The Southern Alignment Alternative would also result in the potential displacement of Vessels Stallion Farm, which is an approximately 2,000-acre property engaged in horse breeding and agricultural activities representative of the rural character of the community. Introduction of the new roadway alignment would divide the large horse farm. The large open pastures and involvement with the horse racing industry fit with the rural history and character of the community. Relocation of Vessels Stallion Farm would alter the character of the community and reduce the community cohesion by both reducing views and visual quality within the river valley and by displacing a business that is representative of the rural character of the community. The relocation of this 2,000-acre property would result in an approximate 3.8 percent property tax loss to the proposed project area. This would be an approximately 0.3 percent loss of property tax revenue relative to San Diego County. The 30-50 jobs that may be eliminated with the relocation of Vessels Stallion Farm would result in a 0.004 percent reduction in local jobs. The 30-50 jobs lost would remove an important part of the job market and related economy in the local community. Additionally, displacement of Vessels Stallion Farm may affect future development along the southern edge of the San Luis Rey River Valley by creating new access to land that is currently occupied by the farm. Conversion of this undeveloped land to other uses would further degrade the rural character of the surrounding community. A complete discussion of potential growth-related impacts related to the Southern Alignment Alternative is located in Section 3.4, Growth.

The Southern Alignment Alternative would result in noise increases that would exceed the NAC at four residences, one multi-family residence, and two businesses. Noise abatement was not found to be reasonable for any of the impacted residential receivers. Abatement was not considered at the businesses because human uses at these businesses are transitory and patrons would not be subjected to prolonged periods of increased noise exposure.

These increases in noise would be isolated to the impacted receivers described above, as the increase in noise would not exceed the NAC along the majority of the corridor. Furthermore, these increases in noise would be limited to the private owners of these receivers or patrons visiting the impacted businesses for a short duration. Thus, this increase in noise would not substantially alter the existing community character and cohesion. A complete discussion of noise-related impacts is located in Section 3.19, Noise.

Implementation of the Southern Alignment Alternative would not displace any residences, key community recreational facilities, or community service facilities. However, as discussed above, displacement of Vessels Stallion Farm would displace a business that is representative of the rural character of the community. Displacement of Vessels Stallion Farm may affect future development along the southern edge of the San Luis Rey River Valley, which could further degrade the rural character of the surrounding community. Furthermore, implementation of the Southern Alignment Alternative would reduce the visual quality of the community by constructing a new transportation corridor in a largely undeveloped area. While these changes would not divide the existing community in a way that would prevent travel from either side of the proposed roadway, these changes would alter the existing community character and cohesion.

No Build Alternative

The No Build Alternative would not affect community character or cohesion because it would not be widened or realigned as proposed under the build alternatives but would maintain the rural character of the area.

3.6.4 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) has been designed with input from the community to avoid unnecessary impacts to community character and cohesion. Caltrans has conducted and participated in a number of community outreach meetings and events since 2001 in a comprehensive effort to gather input and comments from the surrounding communities and stakeholders. Community groups and agencies in attendance at outreach meetings have included the Bonsall Area for Rural Community (BARC); the Bonsall Sponsor Group; County of San Diego Department of Public Works and Department of Parks and Recreation; North County Fire Protection District; Vista, Fallbrook, and Bonsall Kiwanis Clubs; Rancho Monserate and Sycamore Ranch Homeowner Associations; Bonsall and Fallbrook Chambers of Commerce; Fallbrook Land Conservancy; and others. A public scoping meeting was held on October 8, 2008, and an open house was held on December 1, 2008. Newspaper advertisements for the public scoping meeting were run in *North County Times* on September 28, 2008; *Fallbrook Village News* on September 25, 2008; and *Hispanos Unidos*, a Spanish-language newspaper, on September 22, 2008. A Spanish-language interpreter was present at the public scoping meeting and Spanish-language handouts were available.

Caltrans also conducted extensive general community outreach and would continue to work with the community throughout the planning process. In addition to community outreach, design iterations of the Existing Alignment Alternative (Preferred Alternative) have effectively minimized impacts to homes, businesses, and visual resources; and reduced the amount of necessary excavation along the corridor.

By following the existing alignment, impacts to community character and cohesion would be minimized. Mitigation efforts overlap with those proposed for visual impacts, including more natural slope contouring (2:1), and minimal safety lighting. Mitigation proposed for visual and noise impacts is discussed in Section 3.1, Land Use.

Use of the Visual measures as discussed in Section 3.11.4, such as the proposed plant palette, wall/bridge treatments, and light fixtures, would ensure that the rural community character is protected as much as is possible; a rural community identity can be fostered using these measures.

Revegetation via duff, hydroseeding, planting and/or possibly temporary irrigation and replacement with in-kind/similar native species will occur to the extent that is feasible and practicable. Mitigation for both temporary and permanent impacts would have mitigation management and monitoring plans to further ensure that all of the habitat types of self-sustaining over the long-term. A regular weeding and maintenance schedule may be implemented.

Measures to mitigate removal of vegetation would include removal of nonnative plants such as arundo and replanting with native trees and shrubs. Riparian areas will be planted with vegetation such as willow, cottonwood, and/or sycamore trees to increase shade canopy and to aid in restoring riparian habitats and help reduce runoff impacts to water quality.

The plant palette would consist of native trees, shrubs, and ground covers that are similar in composition to the adjacent habitats and that reinforce the landscape concept and would be developed with the District Landscape Architect and Biologist. This plant palette would be consistent with native vegetation on the steep hillsides [such as California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilulars*), bush sunflower (*Encelia californica*), toyon (*Heteromeles arbutifolia)*, lemonadeberry (*Rhus integrifolia*)] with rock outcroppings and along the riverbed [such as California sycamore (*Platanus recemosa*), western cottonwood (*Populus fremontii*), willow species (*Salix* spp.)] for the Existing Alignment Alternative, (Preferred Alternative), and would maintain the pastoral landscape of the area of the proposed Southern Alignment Alternative. Small spaces within developed, urbanized areas may be landscaped with noninvasive ornamental plant materials. The size of the material selected would be large enough to visually reduce the scale of the proposed widened highway improvements.

Southern Alignment Alternative

The Southern Alignment Alternative was developed in conjunction with the community outreach efforts, design considerations, and design iteration process described above. However, no mitigation is feasible for the impacts associated with introducing a new transportation corridor into a largely undeveloped area and potentially displacing Vessels Stallion Farm. Therefore, impacts to community character and cohesion of Vessels Stallion Farm associated with the Southern Alignment Alternative would be adverse.

Mitigation is not feasible for community character and cohesion based on the Southern Alignment Alternative introducing a new transportation facility; therefore, none is proposed. Mitigation proposed for visual and noise impacts is discussed in Section 3.1, Land Use. Use of the Visual measures as discussed in Section 3.11.4, such as the proposed plant palette, wall/bridge treatments, and light fixtures, would ensure that the rural community character is protected as much as is possible: a rural community identity can be fostered using these measures.

Revegetation via duff, hydroseeding, planting and/or possibly temporary irrigation and replacement with in-kind/similar native species will occur to the extent that is feasible and practicable. Mitigation for both temporary and permanent impacts would have mitigation management and monitoring plans to further ensure that all of the habitat types of self-sustaining over the long-term. A regular weeding and maintenance schedule may be implemented.

Measures to mitigate removal of vegetation would include removal of nonnative plants such as arundo, and will be replanted with native trees and shrubs. Riparian areas will be planted with vegetation such as willow, cottonwood and/or sycamore trees to increase shade canopy and to aid in restoring riparian habitats and help reduce runoff impacts to water quality.

The plant palette would consist of native trees, shrubs, and ground covers that are similar in composition to the adjacent habitats and that reinforce the landscape concept and would be developed with the District Landscape Architect and Biologist. This plant palette would be consistent with native vegetation on the steep hillsides [such as California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilulars*), bush sunflower (*Encelia californica*), toyon (*Heteromeles arbutifolia)*, lemonadeberry (*Rhus integrifolia*)] with rock outcroppings and along the riverbed [such as California sycamore (*Platanus recemosa*), western cottonwood (*Populus fremontii*), willow species (*Salix* spp.).]

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3.7 RELOCATIONS AND REAL PROPERTY ACQUISITIONS

The Draft Relocation Impact Statement (DRIS), a separate technical study prepared in December 2009 as an appendix to the CIA dated April 2010, and the Final Relocation Impact Memorandum (FRIM) prepared on September 20, 2011, serve as the basis for this analysis of relocation impacts.

3.7.1 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 CFR 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. See Appendix D 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.). See Appendix C for a copy of Caltrans' Title VI Policy Statement.

3.7.2 Affected Environment

As discussed in Section 3.1, the proposed project is located within the unincorporated community planning areas of Bonsall and Fallbrook. Land uses near the proposed project are generally composed of residential homes, equestrian facilities, agricultural land, and open space associated with the San Luis Rey River Valley and hilly topography. Agricultural and large-lot or rural residential are the main land uses within 0.5 mile of the two build alternatives. Land uses north of the existing SR-76 roadway within Bonsall consist of a commercial shopping center, a County of San Diego Department of Public Works pond maintenance facility, the Sweetgrass Estates residential neighborhood, the Riverview Church, and vacant land. Land uses south of the existing SR-76 roadway within Bonsall are largely agricultural, with large stretches of undeveloped land associated with the San Luis Rey River. A large portion of this land is associated with Vessels Stallion Farm, which is an approximately 2,000-acre property whose main operation is breeding race horses. Land uses north of the existing SR-76 roadway within Fallbrook consist of an orchard, the Golf Club of California, and the Sycamore Ranch residential community, with individual rural residential units and businesses dispersed along the length of the current SR-76 roadway. A Mobil gas station, a mobile hamburger stand on a month-to-month lease, and a Park and Ride facility are located on the northeast side of the SR-76/Old Highway 395 (a County road) intersection. Land uses south of the current SR-76 roadway within Fallbrook consist of undeveloped land associated with the San Luis Rey River, the Faubus Farms business, and the Kendall Palm Nursery. Additionally, a Rainbow Municipal Water District facility is located near the southwest side of the SR-76/Old Highway 395 intersection. The Rancho Monserate Golf Course with its associated residential neighborhood is also located south of the current SR-76 roadway south of the San Luis Rey River.

3.7.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

Implementation of the Existing Alignment Alternative (Preferred Alternative) would not displace any residential structures.

Implementation of the Existing Alignment Alternative (Preferred Alternative) would result in partial property acquisitions to a variety of other properties adjacent to the current SR-76 roadway. Anticipated impact locations are shown in Table 3.7-1 for the Existing Alignment Alternative (Preferred Alternative). In addition to the permanent impacts, the Existing Alignment Alternative (Preferred Alternative) would require displacement of a mobile hamburger stand and the relocation of a small fruit stand east of Sage Road on the southern edge of SR-76. The hamburger stand is on a month-to-month lease and would not be relocated. The fruit stand could be relocated onto the remainder of the parcel and would not require identification of a new business site. Caltrans would coordinate with the business owner to relocate the fruit stand on the remainder of the parcel. Partial property acquisitions would occur to a variety of other properties adjacent to the Existing Alignment Alternative (Preferred Alternative).

Table 3.7-1. Existing Alignment Alternative (Preferred Alternative) Potentially Impacted Parcels

Assessor Parcel Number	Land Use
123-310-23-00	A70/Residential
123-310-27-00	A70/Residential
123-310-36-00	A70/Residential
123-310-51-00	A70/Residential
123-310-59-00	A70/Residential
123-350-35-00	A70/Agricultural
123-350-36-00	A70/Agricultural
123-310-60-00	A70/Residential
123-380-41-00	A70/Religious
126-230-61-00	Residential/SFR*
123-381-06-00	A70/Riverbed
124-140-22-00	A72/Riverbed
124-140-23-00	A72/Riverbed
124-140-24-00	A72/Riverbed
124-150-26-00	A72/Riverbed
124-140-41-00	A70/Residential
124-140-42-00	A70/Residential
124-140-43-00	A70/Riverbed
124-140-44-00	C36/Parking Lot
124-150-25-00	A72/Riverbed
124-351-04-00	A70/Residential
124-351-15-00	A70/Agricultural
124-351-16-00	A70
124-351-46-00	A70/Residential
124-351-47-00	A70/Residential
124-351-56-00	A70
124-351-57-00	A70
125-351-42-00	A70
124-351-58-00	A70
124-462-07-00	Residential/SFR
124-462-08-00	Residential/SFR
124-462-25-00	Residential/Golf Course
124-463-23-00	Residential/Golf Course
125-050-60-00	S90/Agricultural
125-080-13-00	A72/Agricultural
125-080-18-00	S90/Agricultural
125-080-19-00	S90/Agricultural
126-060-76-00	A70/Riverbed

*SFR = single-family residence
Note: The information listed is for planning purposes only and is subject to change based on final design.

Implementation of the Existing Alignment Alternative (Preferred Alternative) would result in partial "acquisition" of land on Faubus Farms, which is a horse boarding and training facility with horse stables, barns, and a track located along the southern edge of the current SR-76 roadway. The Existing Alignment Alternative (Preferred Alternative) would acquire land that currently is developed with horse corrals; however, space would remain on the property to allow for relocation of these horse corrals on-site. Caltrans would coordinate with the business owner to relocate the horse corrals on the remainder of the property. Therefore, the business would not require relocation and would be able to continue operations.

Temporary disruptions to traffic flow and existing traffic patterns from construction activities associated with the Existing Alignment Alternative (Preferred Alternative) may result in temporary economic impacts to businesses adjacent to the current SR-76 roadway. Such businesses could experience temporary economic impacts during construction if patronage is reduced due to access difficulties or alternative routes that could reduce the number of potential business patrons traveling along SR-76. Businesses and community facilities near the proposed project have the potential for experiencing temporary adverse economic impacts as a direct result of temporary disruptions to traffic flow and existing traffic patterns even if they are not relocated.

Southern Alignment Alternative

As shown in Table 3.7-2, implementation of the Southern Alignment Alternative could result in acquisition and displacement of Vessels Stallion Farm. A number of existing facilities associated with the Vessels Stallion Farm would be impacted by the Southern Alignment Alternative based on the proposed right-of-way. Facilities affected may be able to be relocated to another portion of the property, but the ability to maintain the functions of those facilities and the overall farm operation is unknown at this time. In addition, access under the roadway may be required with implementation of the Southern Alignment Alternative, which would traverse the property. The ability to maintain the current use of the property under this alternative is unknown at this time and would be determined as part of the right-of-way acquisition process if the Southern Alignment Alternative were to be implemented. Because of the uncertainty of the ability of the farm to continue to operate if under the Southern Alignment Alternative is implemented, the possibility of relocating the facility is evaluated as part of this alternative.

Table 3.7-2. Anticipated Displacements under the Southern Alignment Alternative

Number and Type of Single-Family Units	Mobile Homes	Number and Type of Multi-Family Units	Residential Displacements (Units/Residents)	Nonresidential Displacements (Type/Employees)
0	0	0	0	One Business (Vessels Stallion Farm) (30–50 employees) (2,000 acres)

The relocation of this 2,000-acre property would result in an approximate 3.8 percent property tax loss to the study area. This would be an approximate 0.3 percent property tax loss to San Diego County. This would result in the displacement of an estimated 30 to 50 employees. The 30 to 50 jobs that may be eliminated with the relocation of Vessels Stallion Farm would result in 0.004 percent reduction in local jobs. According to the FRIM, relocation of Vessels Stallion Farm would pose several difficulties. Vessels Stallion Farm is located on land zoned for agricultural uses (A-70). Agricultural land on Vessels Stallion Farm is currently in cultivation for use as pastures for the horses bred on-site and to grow crops. Facilities on Vessels Stallion Farm associated with the business include horse stables, a barn, an office building, a 3-furlong (660-foot) track, and agricultural land in cultivation.

Because Vessels Stallion Farm is located on agricultural land in cultivation, all facilities associated with Vessels Stallion Farm would have to be relocated, reconstructed, or recultivated on one similarly large continuous property zoned for agricultural uses. Research conducted as a part of the FRIM for a large continuous property consisting of agricultural land found that the nearest suitable property to relocate all Vessels Stallion Farm facilities was in northern Los Angeles County, just north of Santa Clarita. Additional properties are available farther north in Ventura County.

Relocation to either of these locations, however, may negatively affect the Vessels Stallion Farm business, which is dependent on proximity to the horse racing circuits using the Del Mar Race Track in San Diego County and the Los Alamitos Race Track in Orange County. Horses from Vessels Stallion Farm that race at these tracks benefit from their proximity to these locations that allow for shorter travel times before the races. Relocation to either northern Los Angeles County or Ventura County would result in an increase in travel time to the Del Mar and Los Alamitos race tracks. Vessels Stallion Farm would lose the business advantage it enjoys being located near the Del Mar and Los Alamitos race tracks if it were relocated to either northern Los Angeles County or Ventura County. Should this alternative be identified, RAP benefits would be available consistent with state and federal law.

The current right-of-way cost analysis is based on corridor estimates that are subject to some uncertainty and variation. The estimates are forecasts of anticipated costs for properties based on the data available and professional experience. The estimates are not based on appraisals of individual parcels, but are broader in scope, since the expenditures for final project design and right-of-way delineation have not been authorized. Any future behavior of property owners and the general economy can only be reasonably assumed and may or may not materialize.

Because the Southern Alignment Alternative is expected to impact the utility of the remaining Vessel Stallion Farm parcel, it is reasonable for Caltrans, for budgeting purposes, to plan for a full acquisition of the Vessel property. The cost estimates in the Draft EIR/EIS did not account for the value of any property remaining after the proposed project is complete. Caltrans would update the Southern Alignment Alternative estimate in the Final EIR/EIS to include the “net” value (after the sale of the remaining Vessel Stallion Farm parcel). However, even after this adjustment, the Southern Alignment Alternative would cost considerably more than the Existing Alignment Alternative (Preferred Alternative) due to the two additional San Luis Rey River bridge crossings.

In addition to displacements, partial property acquisitions would occur to a variety of other properties adjacent to the Southern Alignment Alternative. Anticipated impact locations for the Southern Alignment Alternative are shown in Table 3.7-3.

In addition to the permanent impacts, the Southern Alignment Alternative would result in right-of-way acquisitions on a parcel that contains a roadside fruit stand and another parcel occupied by Faubus Farms. Similar to the Existing Alignment Alternative (Preferred Alternative), the Southern Alignment Alternative would require displacement of a mobile hamburger stand and the relocation of a small fruit stand east of Sage Road on the southern edge of SR-76. The hamburger stand is on a month-to-month lease and would not be relocated. The fruit stand could be relocated onto the remainder of the parcel and would not require identification of a new business site.

Table 3.7-3. Southern Alignment Alternative Potentially Impacted Parcels

Assessor Parcel Number	Land Use
124-150-23-00	A72/Riverbed
124-351-69-00	A72/Riverbed
125-080-13-00	A72/Agricultural
125-080-18-00	S90/Agricultural
125-080-19-00	S90/Agricultural
125-090-36-00	S90/Riverbed
126-230-30-00	C36/Parking Lot
126-230-30-00	A70/Riverbed
126-230-57-00	A70/Riverbed

Temporary disruptions to traffic flow and existing traffic patterns from construction activities associated with the Southern Alignment Alternative may result in temporary economic impacts to businesses at the intersections of South Mission Road/SR-76 and Old Highway 395/SR-76, similar to those outlined under the Existing Alignment Alternative (Preferred Alternative).

No Build Alternative

The No Build Alternative would not require any relocation because it would not be widened or realigned; therefore, no properties would be adversely impacted as proposed under the build alternatives.

3.7.4 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative)

Whenever possible, the Existing Alignment Alternative (Preferred Alternative) has been designed to avoid existing community facilities, businesses, and neighborhoods, thereby minimizing the number of necessary relocations.

Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees would be entitled to moving expenses. All benefits and services would be provided equitably to all residential and business displacees without regard to race, color, religion, age, national origins, or disability, as specified under Title VI of the Civil Rights Act of 1964.

Temporary impacts to businesses during construction would be minimized through implementation of a traffic management plan that would include requiring signage for directions to commercial centers, providing accessible ingress/egress routes into parking lots, and other measures.

Southern Alignment Alternative

Similar design considerations were incorporated into development of the Southern Alignment Alternative to avoid existing community facilities, businesses, and neighborhoods, thereby minimizing the number of necessary relocations.

Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees would be entitled to moving expenses. All benefits and services would be provided equitably to all residential and business displacees without regard to race, color, religion, age, national origins, or disability, as specified under Title VI of the Civil Rights Act of 1964.

Temporary impacts to businesses during construction would be minimized through implementation of a traffic management plan that would include requiring signage for directions to commercial centers, providing accessible ingress/egress routes into parking lots, and other measures.

3.8 ENVIRONMENTAL JUSTICE

The CIA, a separate technical study prepared in April 2010, serves as the basis for this analysis of impacts to community character and cohesion.

3.8.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This Executive Order 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 Department of Health and Human Services 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 its director, which can be found in Appendix C of this document.

3.8.2 Affected Environment

A project study area was delineated for the CIA using a combination of year 2000 decennial census (the most recent comprehensive set of demographic data available) block groups, school district boundaries, generalized land uses, and municipality boundaries located within the vicinity of the project. The study area was delineated to encompass both primary (direct) impacts and secondary (indirect) impacts. Ultimately, a study area was chosen that was encompassed by the boundaries of seven census block groups of varying size (188.02.1, 188.02.2, 188.02.3, 188.02.4, 188.03.1, 190.02.1, and 191.01.1) shown in Figure 3.8-1. A portion of each of these census block groups fell within at least 0.5 mile of the centerlines of the proposed alternative alignments within the project limits.

Race and Ethnicity

Minority racial groups listed in the 2000 decennial census include Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, and Some Other Race/Two or More Races. Persons of Hispanic origin are reported not as a race but as an ethnic group and are calculated as a proportion of all races.

Table 3.8-1 shows the racial and ethnic breakdown for the CIA study area within each of the potentially affected census block groups for the year 2000. The proportions of minority populations within each potentially affected census block group range from 8.1 to 56.1 percent. Census block groups 190.02.1 and 191.01.1 have the largest minority populations of 33.9 and 56.1 percent, respectively. Both census block groups had Hispanic populations that were larger than those within other census block groups (27.5 and 35.5 percent, respectively) and census block group 191.01.1 had an American Indian and Alaskan Native population larger than all other census block groups (15.5 percent). These higher percentages of minority populations were in the census block groups located in the eastern portion of the CIA study area. The minority population for census block group 190.02.1 is higher than percentages for Bonsall, Rainbow, and Valley Center, but lower than the percentages for Fallbrook and San Diego

County. The minority population for census block group 191.01.1, however, is larger than the minority population for all of the communities surrounding the CIA study area and San Diego County. The western border of these two census block groups is adjacent to I-15. Therefore, the minority populations within these two census block groups are not located along either alignment and would be equally affected by both build alternatives.

Table 3.8-1. CIA Study Area Race and Ethnicity – 2000

Race/Ethnicity	Year 2000 Census Block Groups							San Diego County
	188.02.1	188.02.2	188.02.3	188.02.4	188.03.1	190.02.1	191.01.1	
Total Population	1,533	3,082	1,399	1,336	3,101	1,584	4,065	2,813,833
White	87.7% (1,345)	93.9% (2,895)	95.3% (1,333)	95.1% (1,271)	85.6% (2,656)	76.3% (1,208)	62.9% (2,556)	66.5% (1,871,839)
Black or African American	0.4% (6)	0.3% (10)	0.1% (2)	0.4% (6)	0.9% (28)	0.2% (3)	1.5% (62)	5.7% (161,480)
American Indian and Alaska Native	0.3% (4)	0.5% (14)	0.7% (10)	0.7% (10)	0.5% (15)	0.8% (12)	15.5% (630)	0.9% (24,337)
Asian	1.7% (26)	1.8% (56)	1.6% (23)	1.6% (22)	2.0% (63)	2.3% (37)	3.1% (125)	8.9% (249,802)
Native Hawaiian and Other Pacific Islander	0.0% (0)	0.3% (9)	0.3% (4)	0.2% (3)	0.1% (3)	1.3% (20)	0.1% (6)	0.5% (13,561)
Some Other Race/Two or More Races[1]	9.9% (152)	3.2% (98)	1.9% (27)	1.8% (24)	10.8% (336)	19.2% (304)	16.9% (686)	17.5% (492,814)
Hispanic or Latino	12.1% (185)	7.2% (223)	7.4% (104)	4.6% (62)	20.8% (644)	27.5% (436)	35.5% (1,442)	26.7% (750,965)
Total Minority	15.9% (244)	11.1% (341)	10.4% (145)	8.1% (108)	25.3% (784)	33.9% (537)	56.1% (2281)	45.0% (1,265,000)

[1] The 1990 census recorded five race categories: (1) White; (2) Black; (3) American Indian, Eskimo, or Aleut; (4) Asian or Pacific Islander; and (5) Other Race. The 2000 census created separate categories for “Asian” and “Native Hawaiian and Other Pacific Islander,” and created an additional race category, “Two or More Races.” To compare both sets of census race data, the 1990 category “Some Other Race” and 2000 category “Two or More Races” were added together for 2000. The 1990 census recorded Asians and Pacific Islanders in the same race category, but in 2000 they were recorded separately. For the purpose of comparing census data in this analysis, they were added together for 2000.

Table 3.8-2 shows the racial and ethnic breakdown of the CIA study area as a whole in comparison to Bonsall, Fallbrook, Rainbow, Valley Center, and San Diego County during the year 2000. In general, the racial and ethnic compositions within Bonsall showed similar trends to those seen in the CIA study area, except for a larger percentage of American Indian and Alaska Natives in the CIA study area (4.3 percent as compared to 0.4 percent in Bonsall). Table 3.8-2 shows that the CIA study area was predominantly White, accounting for 82.4 percent of the population. When comparing the CIA study area with the other surrounding municipalities and communities, the breakdown differs somewhat, with White populations in Fallbrook and the County accounting for 71.8 percent and 66.5 percent, respectively, of the total population.

Table 3.8-2. Regional and County Race and Ethnicity – 2000

Race/Ethnicity	Study Area	Bonsall	Fallbrook	Rainbow	Valley Center	San Diego County
Total Population	16,100	3,401	29,100	2,026	7,323	2,813,833
White	82.4% (13,264)	84.0% (2,857)	71.8% (20,888)	81.4% (1,650)	85.7% (6,275)	66.5% (1,871,839)
Black or African American	0.7% (117)	0.9% (29)	2.0% (415)	0.1% (3)	0.5% (38)	5.7% (161,480)
American Indian and Alaska Native	4.3% (695)	0.4% (13)	0.9% (263)	0.8% (16)	(2.8% (208)	0.9% (24,337)
Asian	2.2% (352)	2.8% (94)	1.5% (447)	2.4% (49)	1.4% (99)	8.9% (249,802)
Native Hawaiian and Other Pacific Islander	0.3% (45)	0.1% (4)	0.3% (87)	0.8% (16)	0.2% (14)	0.5% (13,561)
Some Other Race/Two or More Races[1]	10.1% (1,627)	11.9% (404)	24.0% (7,000)	14.4% (292)	9.4% (689)	17.5% (492,814)
Hispanic or Latino	19.2% (3,096)	21.4% (729)	37.0% (10,853)	21.8% (442)	16.5% (1,206)	26.7% (750,965)
Total Minority	27.6% (4,440)	26.6% (905)	42.7% (12,413)	27.8% (563)	22.7% (1659)	45.0% (1,265,000)

[1] The 1990 census recorded five race categories: (1) White; (2) Black; (3) American Indian, Eskimo, or Aleut; (4) Asian or Pacific Islander; and (5) Other Race. The 2000 census created separate categories for "Asian" and "Native Hawaiian and Other Pacific Islander," and created an additional race category, "Two or More Races." To compare both sets of census race data, the 1990 category "Some Other Race" and 2000 category "Two or More Races" were added together for 2000. The 1990 census recorded Asians and Pacific Islanders in the same race category, but in 2000 they were recorded separately. For the purpose of comparing census data in this analysis, they were added together for 2000.

Income

Persons living with income below a poverty threshold are identified as "low-income," utilizing the annual statistical poverty thresholds established by the U.S. Bureau of the Census. The U.S. Bureau of the Census estimated the nationwide weighted-average poverty level for a family of four in 2008 (the most recent year for which data are available) to be $21,207. The Department of Health and Human Services, which maintains its own, simplified poverty guidelines, estimated the poverty level in 2009 for a family of four in California to be $22,050. For the analysis presented in this document, however, U.S. Housing and Human Services thresholds for 2000 were used. The weighted-average poverty threshold for a family of four in California in 1999 was $17,050. In practical terms, it is not likely that low-income population patterns in the CIA study area have shifted dramatically since the 2000 census.

Table 3.8-3 shows the percentage of people with income considered below poverty within the potentially affected census blocks in comparison to Bonsall, Fallbrook, and San Diego County. The percentage of people in the CIA study area with income below poverty within each potentially affected census block group ranged from 4.8 to 25.8 percent. The highest percentages of people with income below poverty occurred in census block groups 190.02.1 and 191.01.1, with percentages of 25.8 percent and 20.7 percent, respectively. Similar to the minority populations mentioned above, these higher percentages of people with income considered below poverty were in the census block groups located in the eastern portion of the project area, whose western border is adjacent to I-15 and would be equally affected by both build alternatives. These two block groups cover land occupied by the Pala Band of Mission Indians and Pauma Band of Mission Indians.

Table 3.8-3. CIA Study Area Population Below the Poverty Level – 1999

1999	Census Block Groups							Study Area Total	Bonsall	Fallbrook	San Diego County
	188.02.1	188.02.2	188.02.3	188.02.4	188.03.1	190.02.1	191.01.1				
Total Population	1,582	3,077	1,370	1,319	3,111	1,649	3,979	16,087	3,415	28,937	2,722,408
Population Below Poverty Level	76	287	81	123	231	426	822	2,046	223	4,249	338,399
Percent of Population Below Poverty Level	4.8%	9.3%	5.9%	9.3%	7.4%	25.8%	20.7%	12.7%	6.5%	14.7%	12.4%

Source: U.S. Bureau of Census 2000

The percentage of people living with income below poverty in block groups 190.02.1 and 191.01.1, (25.8 percent and 20.7 percent, respectively) are considered low-income populations because these percentages are substantially higher than those for Bonsall (6.5 percent), Fallbrook (14.7 percent), and San Diego County (12.4 percent).

All five of the remaining census block groups have percentages of people living with income below poverty that are less than the percentages for Fallbrook and San Diego County. Two of the remaining five census block groups (188.02.1 and 188.02.3) have percentages of people living with income below poverty smaller than the percentage for Bonsall.

3.8.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The analysis for both build alternatives is the same because the census block groups with higher concentrations of minority and low-income populations would be equally affected by both build alternatives. Census block groups 190.02.1 and 191.01.1 are located at the eastern edge of the CIA study area and are large rural block groups that extend east and north. Consequently, relatively small portions of these two census block groups are actually located within the direct impact area, and the majority of residents within these census block groups are not likely to be affected by the proposed project. Due to the small population within each census block group (905 and 2,096 people, respectively) and large size and rural character of these census block groups, the minority and low-income populations within these census block groups are not highly concentrated in a central location but are dispersed throughout the area of the census block groups. Residences dispersed throughout these large rural census blocks located far from the proposed project would not be affected.

Field reconnaissance of the residential developments within census block groups 190.02.1 and 191.01.1 near the proposed project revealed that they were not likely to contain high concentrations of low-income or minority populations. The Lake Rancho Viejo development located southeast of the intersection of SR-76 and I-15 is a suburban development of new homes built in phases over the last 20 years. All of the homes were single-family detached residential units, ranging from two to five bedrooms, and all appeared to be in good condition. Based on these field observations, it is likely that most of the residents belong to middle or upper-middle income brackets, with a very low concentration of people living at or below the poverty income bracket within the neighborhood. Similarly, the Pala Mesa Village neighborhood

located northwest of the intersection of SR-76 and I-15 is a suburban development of single-family residential units. Homes in this neighborhood appeared to be older, likely to have been constructed in the 1970s or 1980s. All of the homes were single-family detached residential units, ranging from two to five bedrooms, and all appeared to be in good condition. Based on these field observations, it is likely that most of the residents belong to middle or upper-middle income brackets, with a very low concentration of people living at or below the poverty income level within the neighborhood. Additionally, no outward signs were observed during field reconnaissance that would indicate that high concentrations of racial and/or ethnic minorities were present within either neighborhood that could, in turn, be disproportionately affected by the proposed project. Racial and ethnic minorities are likely to reside within both neighborhoods, but there were no apparent indications of concentrations of racial and ethnic minorities above what is seen in the general population of the CIA study area, Fallbrook, Bonsall, or the County of San Diego. Research to determine the actual percentage of minority and low-income populations specific to both neighborhoods is beyond the scope of this analysis. However, census block group data and field reconnaissance have not revealed populations of concern with respect to environmental justice issues within census block groups 190.02.1 and 191.01.1 adjacent to the proposed project.

Additionally, no concentrations of minority or low-income populations within the other five census block groups were apparent along the proposed project alignments during field reconnaissance. The majority of housing near the proposed project alignments within the other five census block groups appeared to be either spaced rural residential or suburban residential development that appeared to be in good condition. Based on these field observations, it is likely that most of the residents belong to middle or upper-middle income brackets with a very low concentration of people living at or below the poverty income level within the area. Additionally, no outward signs were observed during field reconnaissance that would indicate that high concentrations of racial and/or ethnic minorities were present along the alignment that, in turn, could be disproportionately affected by the proposed project. Racial and ethnic minorities are likely to reside in the area along the proposed alignments, but there were no apparent indications of concentrations of racial and ethnic minorities above what is seen in the general population of the CIA study area, Fallbrook, Bonsall, or the County of San Diego. Research to determine the actual percentage of minority and low-income populations specific to residential development along the proposed alignments within these five census block groups is beyond the scope of this analysis. However, census block group data and field reconnaissance have not revealed populations of concern with respect to environmental justice issues within the residential development along the proposed alignments within these five census block groups.

Since the majority of other planned or ongoing projects in the CIA study area are residential developments similar to the type and nature of existing developments, and would introduce housing targeted for middle-income or higher residents, it is not anticipated that implementation of the proposed project would result in any cumulative impacts to low-income populations.

Potential impacts to minority populations or low-income populations include short-term construction-related impacts, changed access for motorists, and reduced community character and cohesion. Low-income populations throughout the CIA study area may be affected by delays for the bus route during the construction period. However, these impacts would not disproportionately affect low-income populations. Furthermore, increased traffic capacity and reduced traffic congestion could improve bus service once the proposed project is complete. The proposed project would also include roadway shoulders for bicyclists, which would benefit nonmotorist travel. All other impacts such as changes in access for motorists and reduced

community character and cohesion would affect the local population regardless of their income level or racial/ethnic background.

Therefore, there is no indication that the construction or operation of the proposed project would result in disproportionately high and adverse impacts to either minority populations or low-income populations relative to the general population of the surrounding area. As a result, no environmental justice impacts are anticipated. Avoidance, minimization, and/or mitigation would not be required since the proposed project would not disproportionately affect minority or low-income populations.

Based on the above discussion and analysis, the SR-76 Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative would not cause disproportionately high or adverse effects on any minority or low-income populations according to Executive Order 12898 regarding environmental justice.

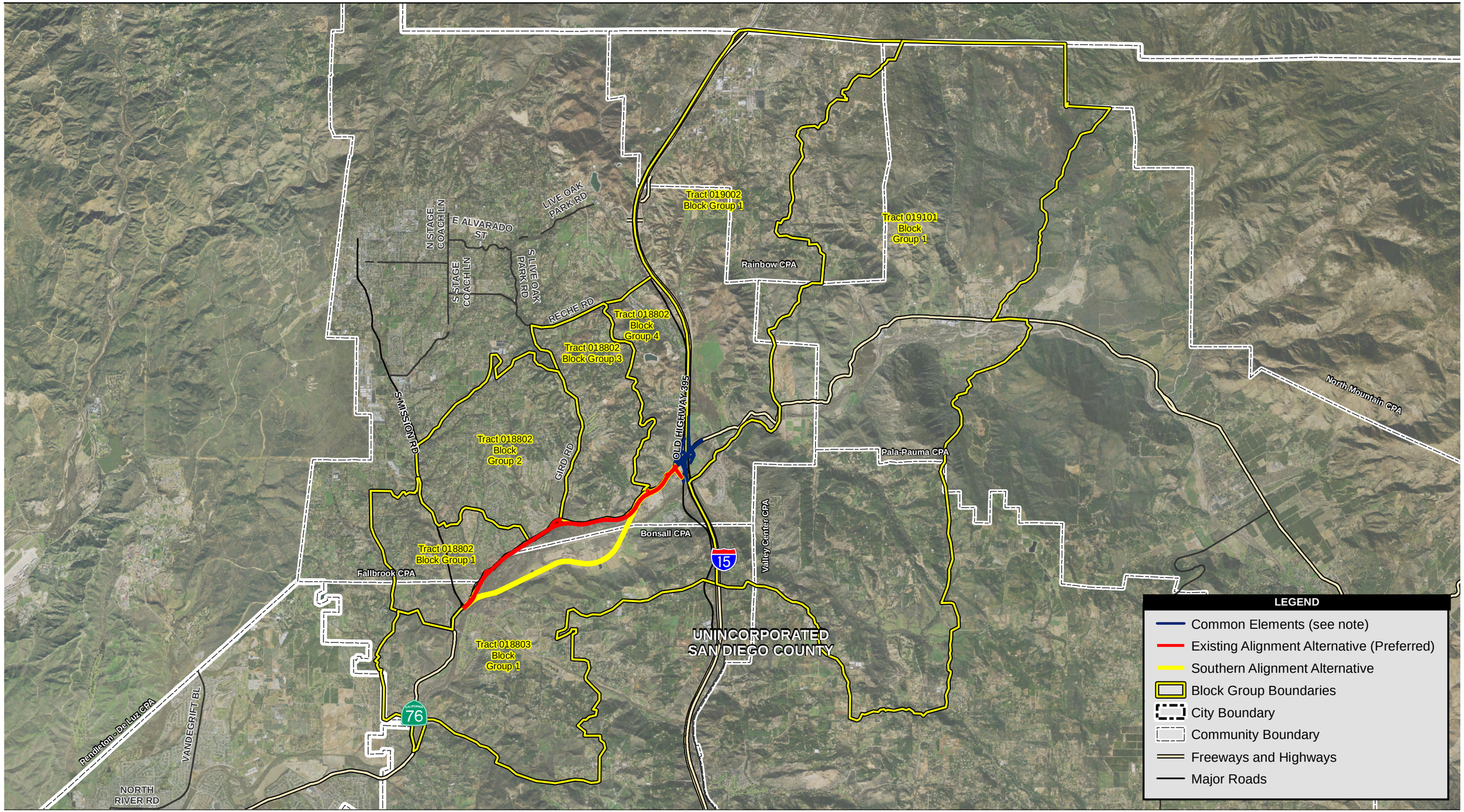
No Build Alternative

Under the No Build Alternative, the proposed improvements to SR-76 would not occur. Under the No Build Alternative, no low-income or minority populations have been identified that would be adversely affected by the proposed project as determined above. Therefore, this alternative is not subject to the provisions of Executive Order 12898.

3.8.4 Avoidance, Minimization, and/or Mitigation Measures

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

Public outreach efforts were conducted for the proposed project but did not identify issues of concern or controversy related to low-income or minority populations. A public scoping meeting was held on October 8, 2008, and an open house was held on December 1, 2008. Newspaper advertisements for the public scoping meeting were run in *North County Times* on September 28, 2008; *Fallbrook Village News* on September 25, 2008; and *Hispanos Unidos*, a Spanish-language newspaper, on September 22, 2008. A Spanish-language interpreter was present at the public scoping meeting and Spanish-language project information sheets were provided. Comments raised at both of these meetings did not relate to environmental justice concerns.



Source: DigitalGlobe 2008, Census 2000; SanGIS 200; Dokken Engineering 2009; USGS 2000

1.6 0.8 0 1.6 Miles

Scale: 1 = 101,376; 1 inch = 1.6 miles

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.8-1
Census Block Groups

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_08_1_CensusBlockGroups.mxd, 10/5/2011, augellop

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3.9 UTILITIES/EMERGENCY SERVICES

3.9.1 Affected Environment

Utilities

Numerous utilities are mapped within and adjacent to the SR-76 corridor. Utilities within the project limits for both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative include San Diego Gas & Electric (SDG&E) gas pipelines and electrical lines; Rainbow Municipal Water District water and sewer pipelines; San Diego County Water Authority (SDCWA) Second San Diego Aqueduct water pipelines; AT&T telecommunication lines; Level 3 Fiber Optics; and Time Warner, Adelphia, and 3 Comm cable and television lines. Currently, some of the electrical, telephone, and cable television lines are located above-ground within the project limits. These utilities serve customers on both the north and south sides of the San Luis Rey River and in the region.

Emergency Services

Emergency responses may come from the emergency crew closest to the emergency scene and would be based on the North County Fire Protection District protocol. The Old Highway 395 and Camino Del Rey stations are the two closest stations to the proposed project limits. Both locations have fire departments with emergency vehicles and, based on availability, either facility could respond to an emergency within the 5.6-mile stretch of SR-76, between South Mission Road and I-15. Both scenarios have been considered when evaluating the effects of adding a concrete median barrier between the lanes.

Law enforcement service in the project area is provided by the San Diego County Sheriff's Department (SDSD) and the California Highway Patrol. No SDSD or California Highway Patrol stations are located immediately along the SR-76 corridor in the project area. Two stations service the area: the Fallbrook Substation located at 388 E. Alvarado Street in Fallbrook and the Vista Station located at 325 S. Melrose Drive in Vista. The Fallbrook and Vista stations have 36 and 78 police deputies, respectively, and handle approximately 2,700 emergency calls per year collectively; the California Highway Patrol handles the majority of emergency calls.

Fire protection and paramedic service in the project area are provided by two independent Fire Protection Districts (FPDs) consisting of the North County FPD and the Vista FPD. The North County FPD operates six stations, with two in proximity to the SR-76 corridor. North County FPD Station 4 is located just north of the SR-76 and I-15 interchange at 4375 Pala Mesa Drive and North County FPD Station 5 is located at 31403 Old River Road, which is just beyond the project boundary to the southwest. The Vista FPD is also located near the project area. The closest Vista FPD station is the Taylor Street station at 1070 Taylor Street in Vista, located south of SR-76 and the project's western terminus.

Suppression of wildland fires in the study area is primarily the responsibility of the California Department of Forestry and Fire Protection (CDF). CDF has numerous fire stations situated throughout San Diego County. The closest CDF station to the study area is located east of I-15 and south of SR-76 in Escondido at 9127 West Lilac Road and covers 47 square miles from Escondido to SR-76.

Emergency Vehicle Travel Time

According to the National Fire Protection Association (NFPA), total response time for fire suppression operations, emergency medical operations, and special operations includes alarm (call) handling time, turnout time, travel time, and initiate action/intervention time. Travel time is the only variable that could be affected by the roadway design.

In May 2010, in coordination with North County Dispatch (NCD) Joint Powers Authority, emergency vehicle travel times to the local streets within the project limits were modeled. Three modeling scenarios from two nearby stations were studied: the current condition for the SR-76 roadway, the Existing Alignment Alternative (Preferred Alternative), and the Southern Alignment Alternative. Emergency vehicles may respond to an emergency within the project limits from either end of the project. Station #4 at 4375 Pala Mesa Drive is near the east end of the project corridor. Station #5 at 31403 Old River Road is located near the west end of the corridor.

Current emergency vehicle travel times were calculated and verified with NCD by placing test calls to each side street through the Computer-Aided Dispatch (CAD) system. Average running speed for the current SR-76 was assumed to be 35 mph with no pull-out areas and only one lane for travel, while the speed for the improved condition (both alternatives) was assumed to be 55 mph with shoulders to pull out into and two lanes of travel.

Evacuation Coordination

The County of San Diego's Office of Emergency Services (OES) coordinates the overall County response to disasters. Along with OES, Fallbrook's FireSafe Council encourages every resident to create a Family Disaster plan, including their evacuation route from their homes, before disaster strikes, to tune into local radio and television stations for additional instructions once a disaster is occurring, to cooperate with emergency officials, and to evacuate as early as possible to avoid traffic congestion and panic. During an evacuation/disaster situation, Caltrans would assist and coordinate with OES and other responding agencies, as needed.

3.9.2 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

Utilities

Construction of the Existing Alignment Alternative (Preferred Alternative) could temporarily disrupt service or require relocation of existing utilities within the roadway construction zone and permanent right-of-way (see Table 3.9-1 at the end of this section). The project proposes to relocate most utilities within the shoulder of the highway, which may require trenching longitudinally along the proposed highway right-of-way. Above-ground utilities such as electrical or telephone lines may be placed underground as part of the relocation and would be coordinated with utility owners. Any construction-related disruption to the provision of services would be temporary and short term. No utility work would be required outside of the project footprint.

Utilities that would require relocation or protection in place include the following:

- SDG&E gas pipelines and electrical lines (above- and below-ground)

- Rainbow Municipal Water District water and sewer pipelines (below-ground)
- SDCWA water pipelines (below-ground, excludes the aqueduct)
- AT&T telecommunication lines (above- and below-ground)
- Time Warner and Adelphia cable and television lines (above- and below-ground)
- Level 3 (fiber optics)

The Existing Alignment Alternative (Preferred Alternative) would result in a minor permanent increase in the demand for electricity for the addition of lighting at intersections. Water would also be used for the initial establishment of landscaping along the roadway. This would be a temporary increase in water demand. The Existing Alignment Alternative (Preferred Alternative) would not result in increased permanent or temporary demands on wastewater or other utility services in the area.

Emergency Services

Construction of the Existing Alignment Alternative (Preferred Alternative) could temporarily disrupt travel along existing roadways, potentially affecting emergency travel times. However, emergency access to all areas along the project alignment would be maintained during construction. Completion of the realigned and widened roadway would maintain or improve emergency travel times, which would benefit public safety.

A review of the Traffic Accident Surveillance and Analysis System (TASAS) data concluded that the higher overall accident rates on SR-76 compared to the statewide average were due to the high number of access points coupled with inadequate sight distance and narrow shoulder width. Standard shoulder widths, decreased access, barriers and standard sight distances proposed for both alignment alternatives would improve these existing deficiencies, improving the operational characteristics of the corridor. Intersections have a higher potential for traffic conflict when compared to other highway sections. At an intersection, continuity of traffic is interrupted, traffic patterns cross, and turning movements occur. Limited at-grade signalized intersections and full access intersections are proposed within the project limits to reduce traffic conflicts and increase capacity. Table 3.10-7 indicates that 15 head-on collisions, 21 side-swipe and 18 broadside accidents occurred between January 2006 and December 2008 within the vicinity of the proposed project. By installing the median barrier, the ability to cross the median is limited, thereby reducing the likelihood of head-on accidents by vehicles crossing the median. Elimination of some left turns would also reduce the potential for broadside type accidents typically associated with left turns. Also, the proposed standard 10-foot-wide shoulders along the corridor, would provide more paved area for added maneuverability.

The Existing Alignment Alternative (Preferred Alternative) would be a new conventional highway with four lanes, including channelization lanes at each of the ramp intersections, and a concrete median barrier that would essentially follow the current SR-76 alignment. The following proposed design features would improve emergency vehicle travel times:

1. Adding standard 10-foot shoulders would allow emergency vehicles to pass congested traffic by using the shoulder, by providing congested traffic an area to pull off the road, and by allowing traffic to pass a broken-down vehicle in the travel lane.
2. Adding one lane in each direction would allow vehicles to move aside when emergency vehicles need to pass and generally would allow a quicker response.

3. The improved geometrics would allow emergency vehicles to travel at higher speeds than on the current facility.

At the intersections of Sweetgrass Lane and the Star Track Way/Sage Road access point, a full access intersection with a median break and left turn pockets would be provided. Emergency vehicles traveling in either direction along the SR-76 roadway would be able to access these side streets similar to the current roadway configuration. Emergency travel times to arrive at these intersections would not be impeded due to the concrete median barrier and should benefit from the improved roadway features.

At Gird Road and at Via Monserate, a signalized intersection would be constructed at the new intersection on the realigned SR-76 roadway and would include right and left turn pockets, as warranted. Emergency Vehicle Signal Preemption may be built and maintained by the County at signalized intersections.

At the intersections of Ramona Drive, Calle de la Vuelta, and Monserate Hill Road, the concrete median barrier is proposed to extend through the intersections, prohibiting left turns onto and off of SR-76. Emergency vehicles traveling from westbound along the new SR-76 roadway would be able to access these streets similar to the existing access, where the local street is accessed by a right turn. Emergency vehicles traveling eastbound along the new SR-76 roadway would require out-of-direction travel to access these side streets. The concrete barrier would block the left-turn movement across the median and a U-turn at the next median break would be required. When an emergency vehicle exits these side streets and travels to the west, it would not experience any out-of-direction travel. However, if the emergency vehicle travels to the east, toward I-15, out-of-direction travel would be required in order to make a U-turn at the next westerly median break.

Emergency Vehicle Travel Time

Emergency vehicle travel times for both alternatives were studied for each side street and were discussed and verified as accurate estimates with NCD. As shown in Tables 3.9-2 and 3.9-3, the emergency vehicle travel times decreased for both roadway alternatives, with the exception of Ramona Drive for the Existing Alignment Alternative (Preferred Alternative) from Station 5. Roadway improvements including widening from two to four lanes to increase roadway capacity, the addition of 10-foot-wide shoulders, and realigning curves for improved sight and stopping distance are factors that can improve emergency travel times.

Under the Existing Alignment Alternative (Preferred Alternative), travel distances for emergency vehicles would be increased by the installation of the proposed concrete median barrier in some instances, since out-of-direction travel would be required to some local side streets. At the same time, the addition of 10-foot-wide shoulders (to allow motorists to pull off the traveled way) and two lanes in each direction would allow emergency vehicles to travel faster, and would improve emergency vehicle travel times.

Evacuation Coordination

SR-76 is currently shown as a Main Evacuation Route within the “Fallbrook, Bonsall, De Luz, and Rainbow Area Evacuation Map” (Revised September 2009), so both roadway alternatives would continue to be considered as a primary roadway that could be used during an evacuation event. Both roadway alternatives add capacity and are a substantial improvement from the current conditions. If emergency responders request that all lanes should flow in a single

direction during an evacuation event, the Existing Alignment Alternative (Preferred Alternative) would have capacity from the new additional lanes to better manage the additional traffic volumes.

Southern Alignment Alternative

Utilities

The Southern Alignment Alternative would result in similar relocation requirements to those discussed for the Existing Alignment Alternative (Preferred Alternative) for those sections of existing roadway common to both alternatives. New sections of roadway south of the San Luis Rey River would include the installation of new utilities to serve the surrounding area. No utility work would be required outside of the project footprint.

Emergency Services

Potential disruption to the provision of emergency services or emergency travel times would be minimal with implementation of the Southern Alignment Alternative. During construction of the Southern Alignment Alternative, the existing SR-76 roadway would remain operational, allowing for continued use by emergency services. Access to all areas along the southern alignment would be maintained during construction. Similar to the Existing Alignment Alternative (Preferred Alternative), emergency service travel times would benefit from the improved roadway operation after construction.

Even with the installation of a concrete median safety barrier, which restricts several left-turn movements, the proposed SR-76 would provide improved geometrics, such as two lanes in each direction and 10-foot-wide shoulders. These improvements would increase traveling speeds and decrease travel times to most locations on both alternatives. Emergency vehicle travel times for both alternatives were studied for each side street and were discussed and verified as accurate estimates with NCD.

The Southern Alignment Alternative would be a new conventional highway with four lanes that would be aligned south of the current SR-76. If the Southern Alignment Alternative is identified, the current SR-76 would remain a two-lane frontage road and become a San Diego County facility that would maintain the same access points to local streets except at both eastern and western connections to the Southern Alignment Alternative. Even though the current SR-76 would not directly benefit from the proposed SR-76 roadway features of the Southern Alignment Alternative, such as widening to four lanes, a higher design speed, and wider shoulders, the emergency vehicle travel times should improve because less traffic would use the current SR-76.

The Southern Alignment Alternative would have four lanes, two 10-foot-wide shoulders, and standard geometrics, and would be used by vehicles traveling to Bonsall, Oceanside, and other surrounding areas to bypass this portion of SR-76.

Emergency Vehicle Travel Time

For the Southern Alignment Alternative, there would be no access points to residential neighborhoods south of the San Luis Rey River within the proposed project limits, so out-of-direction travel to residential areas would not be an issue. Emergency vehicle travel times to existing residential areas located north of the current SR-76 roadway would be improved (see

Tables 3.9-2 and 3.9-3). The addition of 10-foot-wide shoulders to allow motorists to pull off the traveled way and two lanes in each direction would allow emergency vehicles to travel faster and would improve emergency vehicle travel times. During the NCD analysis, the CAD model predicted that emergency vehicles would use the new Southern Alignment Alternative route to respond to emergencies at the opposite end of SR-76, due to the higher traveling speeds that would be available, as opposed to traveling a long distance on the current SR-76 roadway (see Tables 3.9-2 and 3.9-3).

Evacuation Coordination

SR-76 is currently shown as a Main Evacuation Route within the "Fallbrook, Bonsall, De Luz, and Rainbow Area Evacuation Map" (Revised September 2009), so both roadway alternatives would continue to be considered as primary roadways that could be used during an evacuation event. Both roadway alternatives add substantial capacity and are a substantial improvement from the current conditions. In an evacuation situation, all lanes of the highway could be managed in a single directional flow and evacuees traveling south from the north would use the relinquished two-lane frontage roadway as the evacuation route. To access the SR-76 along the Southern Alignment Alternative, out-of-direction travel may be required via the transition access point near South Mission Road to the west or the transition access point near Star Track Way/Sage Road to the east depending upon the direction of the emergency. Evacuees coming from outside the proposed project limits could access the four-lane Southern Alignment Alternative; however, congestion may occur at the transition access points to the east or west depending on the direction of the emergency and instructions from emergency responders.

No Build Alternative

Utilities

No utilities would require relocation as there would be no construction activities with the No Build Alternative. The potential for service disruption could continue due to poles supporting various utilities remaining above-ground along SR-76.

Emergency Services

Under the No Build Alternative, there would be no potential delays to emergency services associated with construction activities as no construction would occur. However, future emergency service travel times would not benefit from improved roadway operations associated with the build alternatives, and increased future traffic congestion could increase emergency travel times.

Emergency Vehicle Travel Times

Under the No Build Alternative, future emergency service travel times would not benefit from the improved roadway conditions and additional capacity that would exist with either of the build alternatives, and increased future traffic congestion could increase emergency travel times.

Evacuation Coordination

Under the No Build Alternative, future evacuations would not benefit from additional capacity on SR-76 that would exist under the proposed build alternatives.

3.9.3 Avoidance, Minimization, and/or Mitigation Measures

Utilities

When utility relocation would be necessary, Caltrans would coordinate closely with the utility companies to determine where and how to move these facilities in the most appropriate, safe, and nondisruptive manner.

Utility poles are considered fixed objects within the shoulders that pose a danger to vehicles that may leave the roadway. Removing these fixed objects would assist in minimizing traffic accidents involving fixed objects. Placing these utilities underground would also minimize the occurrence of service interruption to customers when poles are interfered with or downed.

If the utility poles remain, design features would be implemented to protect the utilities and the motorists along SR-76. Any impacts associated with the relocation of utilities are discussed in the applicable topic sections.

Emergency Services

To minimize any potential adverse delays to emergency access or emergency travel times, a Transportation Management Plan (TMP) would be prepared to ensure that clearly identifiable access to and from all homes, schools, and businesses would be maintained. The TMP would specify how through-access for emergency providers would be maintained at all times during construction. Emergency service providers would be continually informed and updated of all detours and other traffic modifications or delays.

Table 3.9-1. Summary of Potential Underground Utility Conflicts

Company	Location	Type	Proposed Roadway Work	Type	Size	Resolution
ATT	“SR76” 98+00 to 105+00	OH line	grading cut	-	-	relocate
ATT	“SR76” 267+00 to 269+00	cable	grading cut	-	-	lower or protect in place
ATT	“SR76” 106+00	cable	proposed bioswales	-	-	lower or protect in place
ATT	“SR76” 271+60	cable	replacing 36" drainage	(P113813)	-	protect in place
ATT	“SR76” 328+50	cable	proposed drainage feature	C-PC(81A)	9-4"	lower or protect in place
ATT	Highway 395	cable	proposed widening	C-PC(81A)	9-4"	lower or protect in place
ATT	“SR76” 335+00 to 342+00	cable	proposed road and bridge widening	C-PC (80A) and PTS66 (80A)	2-4" and 1-2"	lower or protect in place
ATT	“SR76” 352+00 to 357+50	cable	proposed road widening	C-PC (80A) and PTS66 (80A)	2-4" and 1-2"	lower or protect in place
Level 3	Highway 395	fiber optic	proposed widening	Wilter	-	lower or protect in place
Level 3	“SR76” 328+50	fiber optic	proposed 24" drainage feature over existing drainage	Wilter	-	lower or protect in place
Rainbow	“SR76” 129+50	water	proposed 4x96"x48" RCB drainage	-	-	protect in place
Rainbow	“SR76” 136+00 to 139+00	water	proposed widening and grading cut	unknown	unknown	protect in place
Rainbow	Gird Road	water	proposed widening and replacement	concrete	12"	lower or protect in place
Rainbow	Highway 395	water	proposed widening	-	-	lower or protect in place
Rainbow	“SR76” 328+50	water	proposed 24" drainage feature	-	-	lower or protect in place
Rainbow	“SR76” 329+50	water	proposed 24" drainage feature	-	-	lower or protect in place
Rainbow	“SR76” 98+100 to 107+00	sewer	proposed widening roadway, shallow sewer	RCP	12"	Caltrans to coordinate
Rainbow	Highway 395	sewer	proposed widening	RCP	12"	Caltrans to coordinate
SDGE	“SR76” 98+00 to 106+00	gas	proposed widening and grading cut	PXHP	3"	lower or protect in place
SDGE	“SR76” 123+50 to 128+00	gas	proposed widening and grading cut	PXPH	4"	lower or protect in place
SDGE	“SR76” 98+00 to 106+50	OH line	proposed widening and OH clearance	-	-	adjust PP to grade or relocate
SDGE	“SR76” 136+00 to 150+00	OH line	proposed widening and grading	-	-	adjust PP to grade or relocate
SDGE	“SR76” 159+00 to 170+00	OH line	proposed widening and grading	-	-	adjust PP to grade or relocate
SDGE	“SR76” 180+00 to 195+00	OH line	proposed widening	-	-	relocate
SDCWA	“SR76” 300+16	water	proposed roadway	cement mortar coated and lined steel pipe	96"	to be encased in concrete
SDCWA	“SR76” 300+54	water	proposed roadway	prestressed concrete cylinder	96"	to be encased in concrete
SDCWA	“SR76” 300+94	water	proposed roadway	prestressed concrete cylinder	96"	to be encased in concrete
SDCWA	“SR76” 300+16	blow off valve	proposed roadway	-	-	to be coordinated
TW Cable (Adelphia)	Highway 395	fiber optic	proposed widening	PVC	1.5"-2.5"	lower or protect in place
TW Cable (Adelphia)	“SR76” 328+50	cable	proposed 24" drainage feature	conduit	10"	lower or protect in place
TW Telecom (GS)	Highway 395	cable	proposed widening	conduit	10"	lower or protect in place
TW Telecom (GS)	“SR76” 328+50	cable	proposed 24" drainage feature	conduit	10"	lower or protect in place

*** Project walk would need to be completed to identify all aboveground utilities ***
*** Potholing would need to be completed to verify underground conflicts ***

LEGEND
Affected Utilities
Protect in Place by Contractor

Table 3.9-2. Emergency Vehicle Travel Times: Station 4 (4375 Pala Mesa Drive)

Intersecting Street	Current Condition (2010) (minutes)	Existing Alternative (minutes)	Southern Alternative (minutes)
Sweetgrass Lane	8.8	6.2	6.9
Ramona Drive	8.3	5.9	7.4
Calle de la Vuelta	7.5	5.4	7.2
Via Monserate	6.7	4.9	6.4
Flowerwood Drive	5.7	4.3	5.4
Gird Road	5.5	4.1	5.2
Monserate Hill	4.0	3.1	3.7
Star Track Way	3.2	2.6	2.9
Sage Road	3.2	2.6	2.6

Table 3.9-3. Emergency Vehicle Travel Times: Station 5 (31403 Old River Road)

Intersecting Street	Current Condition (2010) (minutes)	Existing Alternative (minutes)	Southern Alternative (minutes)
Sweetgrass Lane	2.7	2.1	2.7
Ramona Drive	3.2	4.3	3.2
Calle de la Vuelta	4.0	3.9	4.0
Via Monserate	4.8	2.8	4.8
Flowerwood Drive	6.2	3.8	6.1
Gird Road	6.0	3.6	6.0
Monserate Hill	7.5	6.1	6.8
Star Track Way	8.8	5.3	6.0
Sage Road	8.8	5.3	5.7

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3.10 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

3.10.1 Regulatory Setting

Caltrans, as assigned by 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 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. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT 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.

3.10.2 Affected Environment

The traffic section discusses the proposed South Mission Road to I-15 Highway Improvement Project's impacts on traffic and circulation, as well as on pedestrians and bicyclists, both during construction and after completion of the proposed project. The traffic analysis discusses existing conditions, year 2015 (opening year) and future year 2030 (design horizon year) traffic operations for the proposed project. This section is based on the March 2009 Traffic Operations Report, a separate letter report dated May 2009 and an interoffice memorandum dated July 29, 2010.

TRAFFIC FORECAST MODELING

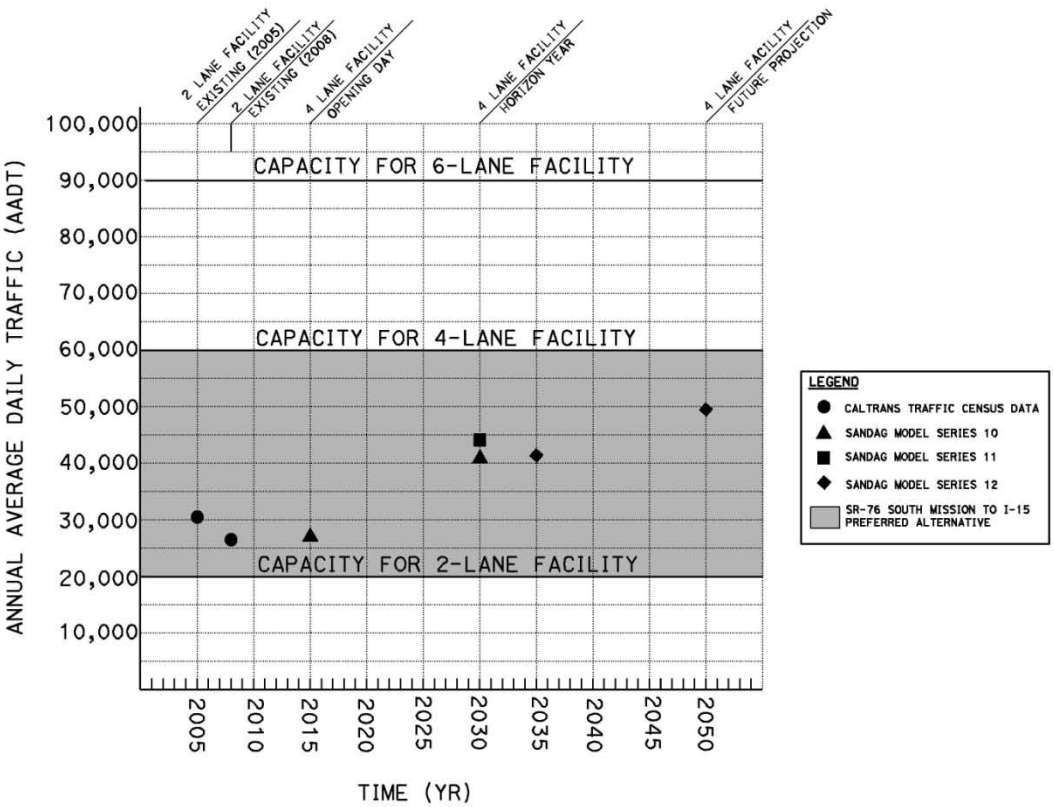
Caltrans began environmental technical studies for the SR-76 South Mission to I-15 project in 2007, basing those studies on the most current traffic projections then available, which were SANDAG's Series 10 project traffic volumes for year 2030. During the course of the project development process, SANDAG released both the Series 11 and Series 12 forecasts and model (with year 2035 forecasts), neither of which identified an appreciable change in predicted traffic volumes. The Series 12 forecasts were adopted by the SANDAG Board of Directors on February 26, 2010.

Table 3.10-1 and Figure 3.10-1, below, compare SANDAG's models by series for the segment between Gird Road and Old Highway 395. As shown, the Series 10 (2030) future traffic volumes for this segment are nearly equal to those forecasted using the Series 12 year 2035 model. Upon review of these different data sets, the Project Development Team (PDT) determined that the initial 2030 traffic volumes used for the basis of the traffic studies were indicative of year 2035–2040 volumes of the latest Series 12 forecasts. Updating the project's Series 10 traffic studies to the most recent Series 12 traffic volumes would not substantially alter the resulting volumes used for determination of the roadway width and other project features.

Table 3.10-1. Comparison of SANDAG Regional Models for SR-76: Segment from Gird Road to Old Highway 395

SANDAG Regional Model	On SR-76 from Gird Road to Old Highway 395
Series 10 Average Daily Traffic (Year 2030) Volumes as reported in the SR-76 South Mission to I-15 Draft Traffic Operations Report, March 2009	40,700
Series 11 Average Daily Traffic (Year 2030) Volumes from the SANDAG Regional Transportation Model, Series 11, Revenue Constrained Scenario	44,400
Series 12 Average Daily Traffic (Year 2035) Volumes from SANDAG Regional Transportation Model, Series 12, Revenue Constrained Scenario	41,400

Figure 3.10-1. Comparison of SANDAG Regional Models for SR-76: Segment from Gird Road to Old Highway 395



A four-lane conventional highway is typically warranted when traffic volumes on the roadway are between 20,000 and 60,000 average daily traffic (ADT). The data show that a four-lane facility on SR-76 is adequate to address the expected future traffic needs, which is consistent with both the 2030 RTP and the recently adopted 2050 RTP.

To improve operations, the project would grade and construct four through-lanes, with channelization (an additional lane in each direction at the intersection) at South Mission, Old Highway 395, and at the southbound and northbound SR-76/I-15 interchange ramps. The study area for the project included area roadway segments, signalized intersections, and unsignalized intersections. In addition, turn pockets would be provided for left- and right-turn movements, where warranted.

TRAFFIC ANALYSIS

This section summarizes the analysis of street segments and intersection operation, intersection queue lengths, freeway mainline operations, merge operations, diverge operations, and future ramp meter operations.

The following key project roadway segments were analyzed:

- SR-76 from South Mission Road to Gird Road
- SR-76 from Gird Road to Old Highway 395
- SR-76 from Old Highway 395 to I-15
- South Mission Road North of SR-76
- Gird Road North of SR-76
- Old Highway 395 North of SR-76
- Old Highway 395 South of SR-76

The signalized intersection analyses included the following intersections:

- SR-76/South Mission Road
- SR-76/Via Monserate
- SR-76/Gird Road
- SR-76/Old Highway 395
- SR-76/I-15 Southbound Ramps
- SR-76/I-15 Northbound Ramps

Unsignalized intersection analyses were conducted for the following study area intersections:

- SR-76/Sweetgrass Lane
- SR-76/Ramona Drive
- SR-76/Calle de la Vuelta
- SR-76/Monserate Hill Road
- SR-76/Star Track Way
- SR-76/Sage Road

Table 3.10-2 shows existing year 2005 and year 2030 traffic volumes for SR-76 and local street segments.

Table 3.10-2. Existing Year 2005 and Year 2030 No Build Traffic Volumes for SR-76 and Local Street Segments

Street Segment	Capacity[1]	Existing Conditions (Year 2005)		No Build (Year 2030)
		ADT[2]	LOS[3]	ADT
SR-76				
South Mission Road to Sweetgrass Lane	16,200	21,000	**F**	28,800
Sweetgrass Lane to Ramona Drive	16,200	18,920	**F**	28,800
Ramona Drive to Via Monserate	16,200	18,400	**F**	28,800
Via Monserate to Gird Road	16,200	18,600	**F**	28,800
Gird Road to Monserate Hill Road	16,200	19,600	**F**	27,000
Monserate Hill Road to Sage Road	16,200	19,400	**F**	27,000
Sage Road to Old Highway 395	16,200	19,800	**F**	27,000
Old Highway 395 to I-15 NB Ramp	16,200	30,500	**F**	30,600
I-15 NB Ramp to Pankey Road	16,200	14,000	**E**	42,000
South Mission Road				
North of SR-76	16,200	18,300	**F**	22,700
Gird Road				
North of SR-76	16,200	2,550	B	3,400
Old Highway 395				
North of SR-76	16,200	11,200	**E**	12,500
South of SR-76	16,200	5,600	C	5,900

[1] Capacity according to County of San Diego Roadway Classification Table
[2] Average daily traffic (ADT) volumes (estimated using "K" factors)
[3] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F
NB=northbound

Level of Service (LOS)

The concept of LOS uses qualitative measures that characterize operational conditions within a traffic stream or at intersections. The levels are given letter designations from A through F, with LOS A representing the best operating conditions and LOS F the worst. LOS is illustrated in Table 3.10-3; each designation represents a range of operating conditions.

Design capacity for a given LOS is the maximum traffic rate of flow for which a highway can provide that LOS. Design capacity varies with a number of factors, including LOS; width of lanes; number of lanes; presence or absence of shoulders; grades; horizontal alignment; operating speed; lateral clearance; side friction generated by parking, driveways, intersections, and interchanges; and volumes of trucks, buses, recreational vehicles, bicycles, and pedestrians.

Existing Traffic Conditions

SR-76 Segments

Existing traffic conditions for year 2005 were analyzed for SR-76 segments within the study area. Table 3.10-4 and Figure 3.10-2 show the existing (2005) ADT volumes, AM and PM peak traffic volume, volume-to-capacity ratio, and the LOS for SR-76 segments. Figures 3.10-3 through 3.10-8 show the LOS, ADT, and AM and PM peak hour traffic volumes for SR-76 and for the local streets within the project area.

Table 3.10-3. Level of Service

LEVELS OF SERVICE
for Multi-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. **No delays**
B		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. **No delays**
C		60	Density becomes noticeable with ability to maneuver limited by other vehicles. **Minimal delays**
D		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. **Minimal delays**
E		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. **Minimal delays**
F		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. **Significant delays**

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways

Table 3.10-4. Existing (2005) SR-76 Peak Hour Segment Operations

SR-76 Segment	Peak Direction	Peak Hour	Peak Volume	V/C	LOS
South Mission Road to Gird Road	EB	AM	556	0.556	C
		PM	740	0.740	D
	WB	AM	636	0.636	C
		PM	730	0.730	D
Gird Road to Old Highway 395	EB	AM	585	0.585	C
		PM	711	0.711	D
	WB	AM	605	0.605	C
		PM	740	0.740	D

V/C = volume-to-capacity ratio; LOS = level of service; EB = eastbound; WB = westbound

Based on the results shown in Table 3.10-4, all segments of SR-76 currently operate at LOS C during the AM peak hours or at LOS D during the PM peak hours, which, according to Table 3.10-3 typically indicates a noticeable reduction in speed and increase in traffic congestion. In addition, Table 3.10-2 indicates that the overall ADT of the facility is over capacity and periods of congestion could occur at any time.

SR-76 Intersections

In addition to the SR-76 roadway segments, peak hour intersection operation was analyzed. Table 3.10-5 provides a summary of existing (2005) intersection operations; LOS was calculated using the Highway Capacity Manual (HCM) analysis method.

Table 3.10-5. Existing SR-76 Intersection Operations

Intersection	Control Type	Peak Hour	Existing	
			Delay[1]	LOS[2]
SR-76/South Mission Road	Signal	AM	19.1	B
		PM	20.3	C
SR-76/Sweetgrass Lane	TWSC	AM	17.9	C
		PM	29.4	D
SR-76/Ramona Drive	TWSC	AM	19.9	C
		PM	24.4	C
SR-76/Calle de la Vuelta	TWSC	AM	18.3	C
		PM	30.8	D
SR-76/Via Monserate	TWSC	AM	25.9	D
		PM	29.5	D
SR-76/Flowerwood Lane	TWSC	AM	28.0	D
		PM	34.4	D
SR-76/Gird Road	Signal	AM	21.6	C
		PM	21.3	C
SR-76/Monserate Hill Road	TWSC	AM	15.8	C
		PM	24.7	C
SR-76/Star Track Way	TWSC	AM	18.1	C
		PM	24.2	C
SR-76/Sage Road	TWSC	AM	33.7	D
		PM	42.8	**E**
SR-76/Old Highway 395	Signal	AM	35.7	D
		PM	32.8	C
SR-76/I-15 Southbound Ramps	Signal	AM	27.1	C
		PM	26.2	C
SR-76/I-15 Northbound Ramps	Signal	AM	36.2	D
		PM	56.7	**E**

[1] Average delay expressed in seconds per vehicle
[2] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F
TWSC=Two-way stop-controlled intersection

As shown in Table 3.10-5, the majority of the intersections operate at a LOS of C or worse, for both the AM and PM peak hours. The SR-76 intersections at Sage Road and at the I-15 northbound ramps are both calculated to currently operate at LOS E in the PM peak hour, which relates to a reduction of speed and more congestion during this peak hour.

Pedestrian and Bike Access

The existing SR-76 provides one 12-foot travel lane in each direction with little to no shoulder between South Mission Road and I-15. No sidewalks, pedestrian ramps, or bicycle lanes are currently provided at any of the SR-76 intersections or along SR-76 between South Mission Road and I-15. Existing sidewalks are located at the River Village shopping center at the SR-76/South Mission Road intersection within the study area.

Accidents and Safety

SR-76 Traffic Accident Surveillance and Analysis System (TASAS) records, from January 1, 2006, to December 31, 2008, indicate that 179 accidents took place on SR-76 between South Mission Road and the I-15 northbound ramp termini. Additionally, 59 accidents took place on I-15 between post miles R45.673 and R47.335.

Accident data were separated into segments to provide detail for a particular roadway segment. These data identify the accident rate and type of accident that are occurring within a particular segment, which allowed for the planning and design of project features that would attempt to reduce the future occurrences of certain accident types. Segments included SR-76 from intersection to intersection and the entire portion of I-15 within the project limits (see Tables 3.10-6 and 3.10-7). For the SR-76/I-15 interchange, the ramps were individually analyzed, as shown in Tables 3.10-8 and 3.10-9. For additional discussion regarding this topic, see Section 3.10.3, under Accident and Safety.

Table 3.10-6. SR-76 between South Mission Road and I-15 Accident Rates (January 2006 – December 2008)

Segment	Length (miles)	MVM	Rates (MVM)					
			Actual			Statewide Average		
			Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
South Mission Rd to Via Monserate	1.34	28.44	0.070	0.53	0.95	0.030	0.58	1.27
Via Monserate to Gird Rd	0.96	21.39	0.000	0.61	1.96	0.030	0.58	1.27
Gird Rd to Old Highway 395	2.01	48.57	0.062	0.60	1.19	0.030	0.57	1.25
Old Highway 395 to the SR-76/I-15 NB ramps	0.46	10.83	0.000	1.20	4.43	0.030	0.55	1.20
I-15 between post miles R45.673 and R47.335	1.66	221.43	0.005	0.12	0.27	0.007	0.19	0.53

MVM = Million Vehicle Miles; Fatal = Fatal/MVM; Fatal + Injury = Fatal+ Injury/MVM; Total = Total Rate; NB = northbound

Table 3.10-7. Accident Types - SR-76 between South Mission Road and I-15 (January 2006 – December 2008)

Segment	Number of Accidents (%)							
	Head-on	Side-swipe	Rear-end	Broadside	Hit Object	Overturn	Other	Total
South Mission Rd to Via Monserate	4 (15%)	4 (15%)	2 (7%)	3 (11%)	10 (37%)	3 (11%)	1 (4%)	27
Via Monserate to Gird Rd	1 (2%)	1 (2%)	25 (60%)	1 (2%)	10 (24%)	3 (7%)	1 (2%)	42
Gird Rd to Old Highway 395	7 (9%)	12 (15%)	24 (31%)	5 (6%)	15 (19%)	14 (18%)	1 (1%)	78
Old Highway 395 to the SR-76/I-15 NB Ramps	3 (9%)	4 (13%)	15 (47%)	9 (28%)	1 (3%)	0 (0%)	0 (0%)	32
I-15 (PM R 45.7 to PM R47.3)	0 (0%)	20 (34%)	13 (22%)	3 (5%)	18 (31%)	5 (8%)	0 (0%)	59

NB = northbound

Table 3.10-8. SR-76/I-15 Interchange Ramps Accident Rates (January 2006 – December 2008)

Ramp	Length (miles)	MVM	Rates (MVM)					
			Actual			Statewide Average		
			Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
SR-76/I-15 NB off-ramp	-	6.21	0.0	0.0	0.16	0.003	0.10	0.40
SR-76/I-15 NB on-ramp	-	8.99	0.0	0.0	0.00	0.003	0.10	0.40
SR-76/I-15 SB on-ramp	-	6.21	0.0	0.0	0.16	0.003	0.10	0.40
SR-76/I-15 SB off-ramp	-	9.97	0.0	0.7	1.30	0.006	0.19	0.75

MVM = Million Vehicle Miles; Fatal = Fatal/MVM; Fatal + Injury = Fatal+ Injury/MVM; Total = Total Rate; NB = northbound; SB = southbound

Table 3.10-9. Accident Types – SR-76/I-15 Interchange Ramps (January 2006 – December 2008)

Ramp	Number of Accidents (%)		
	Rear-end	Broadside	Total
SR-76/I-15 NB off-ramp	0 (0%)	1 (100%)	1
SR-76/I-15 NB on-ramp	0 (0%)	0 (0%)	0
SR-76/I-15 SB on-ramp	0 (0%)	1 (100%)	1
SR-76/I-15 SB off-ramp	13 (100%)	0 (0%)	13

NB = northbound; SB = southbound

Along SR-76, the fatal accident rates from South Mission Road to Via Monserate and from Gird Road to Old Highway 395 were above the statewide averages. The combined fatal and injury rate from Old Highway 395 to the northbound ramps of the SR-76/I-15 Interchange was higher than the statewide average. Additionally, the total rates from Via Monserate to Gird Road and from Old Highway 395 to the northbound ramps of the SR-76/I-15 Interchange were higher than the statewide averages. The accident rate along I-15 between post miles R45.673 and R47.335 was less than the statewide average. Table 3.10-6 summarizes this accident data.

Types of accidents occurring on SR-76 and I-15 within the project limits are shown in Table 3.10-7. On SR-76, from Via Monserate to the Gird Road intersection, 42 accidents occurred,

and about half of these accidents were categorized as rear-end collisions. The stretch of SR-76 from Gird Road to Old Highway 395 also had a higher accident rate when compared to the statewide average, with 78 total accidents. About one-third of these accidents can be attributed to rear-end collisions, and one-fourth of the accidents can be attributed to hit object collisions. On SR-76 from Old Highway 395 to the northbound ramps of the SR-76/I-15 interchange, 32 total accidents occurred. Nearly half of these accidents were rear-end collisions and about one-fourth were attributed to broadside collisions.

Table 3.10-8 is a summary of accident rates for the different ramps of the interchange versus the average rate for similar facilities throughout the state. The accident types for the SR-76/I-15 interchange ramps are summarized in Table 3.10-9. A total of 15 accidents took place on the interchange ramps at the SR-76/I-15 interchange. The combined fatal and injury rate for the SR-76/I-15 southbound off-ramp exceeded the statewide average. The total accident rate for this ramp is also higher than the statewide average. From TASAS records, it was determined that the majority of the accidents on the SR-76/I-15 interchange ramps were rear-end collisions. In addition, 14 of the 15 accidents reported were on the off-ramps.

As shown in Table 3.10-8, of the four ramps, the Fatal + Injury and Total rates for the SR-76/I-15 SB off-ramp exceed the statewide averages. Table 3.10-9 also indicates that 13 rear-end accidents occurred on this ramp.

3.10.3 Environmental Consequences

The traffic analysis compares the operational characteristics of the No Build Alternative to the two build alternatives proposed for the South Mission Road to I-15 highway improvement project. This comparison allows for a determination of what, if any, impacts occur on the street system due to the implementation of a particular alternative. Two future design years were analyzed—the anticipated opening year of 2015 and the horizon year of 2030.

Opening Year 2015 and Horizon Year 2030

In the year 2015 scenario, the SR-76 Melrose Drive to South Mission Road Highway Improvement Project is assumed to be built to four lanes in the analysis of both build alternatives. The South Mission Road to I-15 Highway Improvement Project is assumed to remain two lanes in the No Build Alternative. No interchange improvements are assumed in the No Build Alternative. The two build interchange design variations consider the options of either a partial cloverleaf (DV-1) or spread diamond (DV-2) configuration at the I-15 interchange.

Park and Ride Facility Trip Attraction

The total traffic expected to be attracted by the Park and Ride facility is 1,750 ADT, with 136 inbound/68 outbound trips during the AM peak and 65 inbound/143 outbound trips during the PM peak. Due to the operational characteristics of the Park and Ride facility, the associated trips were determined to primarily use the Old Highway 395/SR-76 intersection and I-15/SR-76 interchange. The Park and Ride facility information was incorporated into the analysis for these two intersections.

Opening Year 2015

Existing Alignment Alternative (Preferred Alternative)

SR-76 Segments

Table 3.10-10 compares the year 2015 peak hour segment operations for the No Build Alternative and Existing Alignment Alternative (Preferred Alternative). For the Existing Alignment Alternative (Preferred Alternative), the two segments of SR-76 would operate at LOS A or B in 2015. This is an improvement when compared to these same segments under the No Build Alternative; in 2015, these segments would operate at a LOS D or worse, indicating a continued decline in roadway operations. Additionally, in the No Build condition, those segments having volume-to-capacity (V/C) ratios approaching or greater than 1 would operate near or over the capacity of a two-lane facility, with longer delays, heavy congestion, and much slower speeds. With the increased capacity of the proposed four-lane facility, the V/C ratios are less than 0.05, which would result in higher traveling speeds, little to no delays, and less congestion.

Table 3.10-10. Opening Year 2015 SR-76 Existing Alignment Alternative (Preferred Alternative) Peak Hour Segment Operations

Street Segment	Peak Direction	Peak Hour	Year 2015 No Build Alternative			Year 2015 Existing Alignment Alternative (Preferred Alternative)		
			Volume	V/C	LOS[1]	Volume	V/C	LOS
South Mission Road to Gird Road	EB	AM	920	0.920	D	1,065	0.355	B
		PM	1,080	1.080	**F**	1,225	0.408	B
	WB	AM	980	0.980	**E**	1,115	0.372	B
		PM	930	0.930	**E**	1,015	0.338	A
Gird Road to Old Highway 395	EB	AM	940	0.940	**E**	1.030	0.343	B
		PM	1,050	1.050	**F**	1,135	0.378	B
	WB	AM	840	0.840	D	1,000	0.333	A
		PM	945	0.945	**E**	1,010	0.337	A

[1] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F.
v/c = volume-to-capacity ratio; EB = eastbound; WB = westbound

SR-76 Intersections

As shown in Table 3.10-11, all of the SR-76 intersections would operate at LOS B for the Existing Alignment Alternative (Preferred Alternative) in the year 2015. For the Year 2015 No Build Alternative, the majority of the intersections would have LOS F, indicating a continued decline in intersection operations if no improvements are provided. When compared to the current condition, as seen in Table 3.10-5, and the No Build Alternative, the Existing Alignment Alternative (Preferred Alternative) would substantially improve intersection operations in year 2015.

Table 3.10-11. Opening Year 2015 SR-76 Existing Alignment Alternative (Preferred Alternative) Intersection Operations

Intersection	Peak Hour	Year 2015 No Build Alternative			Year 2015 Existing Alignment Alternative (Preferred Alternative)		
		Control Type	Delay[1] (seconds)	LOS[2]	Control Type	Delay[1] (seconds)	LOS
SR-76/South Mission Road	AM PM	Signal	21.0 22.1	C C	Signal	17.2 19.3	B B
SR-76/Sweetgrass Lane	AM PM	TWSC[3]	54.0 61.9	**F** **F**	Unrestricted Access	13.6 12.9	B B
SR-76/Ramona Drive	AM PM	TWSC	54.0 63.7	**F** **F**	Restricted Access[4]	10.8 10.3	B B
SR-76/Calle de la Vuelta	AM PM	TWSC	54.0 61.9	**F** **F**	Restricted Access	13.4 12.8	B B
SR-76/Via Monserate	AM PM	TWSC	101.4 78.9	**F** **F**	Signal	12.0 11.2	B B
SR-76/Flowerwood Lane	AM PM	TWSC	61.5 65.0	**F** **F**	NA[5]	NA	NA
SR-76/Gird Road	AM PM	Signal	22.0 21.8	B C	Signal	16.2 17.2	B B
SR-76/Monserate Hill Road	AM PM	TWSC	44.1 63.0	**E** **F**	Restricted Access	12.8 12.9	B B
SR-76/Star Track Way	AM PM	TWSC	44.1 63.0	**E** **F**	NA	NA	NA
SR-76/Sage Road	AM PM	TWSC	44.1 63.8	**E** **F**	NA	NA	NA

[1]Average delay expressed in seconds per vehicle
[2] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F.
[3] TWSC – Two-way stop-controlled intersection
[4] Restricted Access = Left turns prohibited by raised median
[5] NA –Flowerwood Lane would be reconnected to Gird Road. Star Track Way and Sage Road access would be combined into a single access point.

Based on public comments subsequent to the Draft EIR/EIS release, supplemental traffic studies at Via Monserate were done that indicated a traffic signal is warranted at this street's intersection with SR-76. Tables 3.10-11 and 3.10-12 have been revised to account for this project feature. Since this intersection has met the conditions for a traffic signal warrant, both build alternatives would have the same number of signalized intersections.

Intersection configurations and local street access were analyzed and designed to provide optimal sight distance and to be consistent with state and federal standards. A median barrier, with limited openings, was evaluated and included to minimize head-on collisions along the SR-76 roadway. This barrier limits left-turn access at three local streets as identified in Table 3.10-12. Median openings were spaced to provide the least interference to through-traffic on SR-76 and were also evaluated to minimize out-of-direction travel to those local streets with restricted access.

Table 3.10-12. Out-of-Direction Distance

Street	Current Movement	Proposed Movement	Distance to U-Turn (feet)	Distance to U-Turn (miles)	Total Out-of-Direction Distance (miles)
Ramona Road	Left Turn to SR-76 EB	U-Turn at Sweetgrass	1,300	0.25	0.50
	Left Turn from SR-76 EB	U-Turn at Via Monserate	4,450	0.84	1.68
Calle de la Vuelta	Left Turn to SR-76 EB	U-Turn at Sweetgrass	3,475	0.66	1.32
	Left Turn from SR-76 EB	U-Turn at Via Monserate	2,275	0.43	0.86
Monserate Hill Road	Left Turn to SR-76 EB	U-Turn at Gird Road	2,350	0.45	0.90
	Left Turn from SR-76 EB	U-Turn at Sage Road	2,850	0.54	1.08

EB = eastbound

For this project, the out-of-direction travel distance for local street access was designed to be less than approximately 1.5 miles, with most distances being closer to 1 mile (see Table 3.10-12). To enhance roadway operation and safety, acceleration and deceleration lanes along with turn pockets would be further studied and incorporated, whenever practical, during final design.

I-15 Interchange Intersections

For both of the design variations proposed for the SR-76/I-15 interchange, Opening Year 2015 Interchange Intersection Operations are shown in Table 3.10-13.

Table 3.10-13. Opening Year 2015 SR-76/I-15 Interchange Intersection Operations

Intersection	Peak Hour	Year 2015 No Build			Year 2015 Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative[1]		
		Control Type	Delay[3] (seconds)	LOS[2]	Control Type	Delay[3] (seconds)	LOS[2]
Partial Cloverleaf Interchange Configuration							
SR-76/Old Highway 395	AM PM	DNE[2]	DNE	DNE	Signal	34.8 35.1	C D
SR-76/I-15 Southbound Ramps	AM PM	DNE	DNE	DNE	Signal	48.2 41.0	D D
SR-76/I-15 Northbound Ramps	AM PM	DNE	DNE	DNE	Signal	16.9 17.7	B B
Spread Diamond Interchange Configuration							
SR-76/Old Highway 395	AM PM	Signal	39.6 42.3	D D	Signal	38.3 41.8	D D
SR-76/I-15 Southbound Ramps	AM PM	Signal	54.5 46.2	D D	Signal	39.8 38.0	D D
SR-76/I-15 Northbound Ramps	AM PM	Signal	29.5 41.7	D D	Signal	28.8 30.0	C C

[1] Both build alternatives would have the same interchange configuration at the I-15 interchange, and the analysis of interchange operation would be the same for either alignment alternative.
[2] LOS = level of service; DNE = Does Not Exist
[3] Average delay expressed in seconds per vehicle

Intersection operations associated with the partial cloverleaf configuration are calculated to be LOS C for the AM peak hour and LOS D for the PM peak hour at the SR-76/Old Highway 395 intersection, LOS D at the SR-76/I-15 southbound ramps, and LOS B at the SR-76/I-15 northbound ramps. When compared to the current condition, as seen in Table 3.10-5, this configuration improves the intersection operation for both SR-76/I-15 ramp intersections. Delay times for this configuration cannot be directly compared to the current and No Build conditions since this configuration does not exist, but when compared to the spread diamond configuration, an improvement in delay times can be seen, except for the southbound ramps (not improved).

For the spread diamond interchange configuration, intersection operations are calculated to be LOS D for both the SR-76/Old Highway 395 intersection and the SR-76/I-15 southbound ramps and is calculated to be LOS C for the SR-76/I-15 northbound ramps. This configuration maintains LOS of the current condition for the SR-76 intersections with Old Highway 395 and the SR-76/I-15 southbound ramps and improves the LOS from D to C for the SR-76/I-15 northbound ramp intersection. The delay times for all intersections would be reduced as compared to the No Build Alternative.

Southern Alignment Alternative

Under the Southern Alignment Alternative, the existing SR-76 alignment would be relinquished to the County of San Diego and would function as a frontage road for existing property and business access. As a County road, it would be maintained by the County. Caltrans would coordinate with the County during design to ensure that any relinquished roadways are in good repair. For purposes of the Southern Alignment Alternative traffic analysis, through-traffic could still traverse the corridor on the current SR-76 alignment; however, it was assumed that the new Southern Alignment Alternative would likely be more enticing due to the lack of local roadway intersections.

SR-76 Segments

Figure 3.10-4 shows forecasted traffic volumes for the Southern Alignment Alternative in 2015. Since this roadway configuration does not currently exist, this alternative cannot be directly compared to the current condition or the No Build Alternative. For V/C ratio calculations, capacities for the SR-76 Southern Alignment Alternative were based on 1,500 vehicles per hour per lane, in consideration of the continued operation of the existing SR-76 alignment as a local traffic roadway. In addition, the existing SR-76 roadway is assumed to be improved to County standards under this alternative. As seen in Table 3.10-14, the four-lane Southern Alignment Alternative is calculated to operate at LOS B or better during all peak hours.

Table 3.10-14. Opening Year 2015 SR-76 Southern Alignment Alternative Peak Hour Segment Operations

Street Segment	Peak Direction	Peak Hour	Year 2015 No Build			Year 2015 Southern Alignment Alternative		
			Volume	V/C	LOS	Volume	V/C	LOS
SR-76 (Southern Alignment)	EB	AM	DNE	DNE	DNE	900	0.30	A
		PM	DNE	DNE	DNE	1,090	0.36	B
	WB	AM	DNE	DNE	DNE	870	0.29	A
		PM	DNE	DNE	DNE	1,020	0.35	B

v/c = volume-to-capacity ratio; LOS = level of service; DNE = Does Not Exist; EB = eastbound; WB = westbound

SR-76 Intersections

Traffic modeling indicated that the Southern Alignment Alternative would have a lower Annual Average Daily Traffic (AADT) when compared to the Existing Alignment Alternative (Preferred Alternative), since local traffic would use the proposed frontage road to travel in and around the residences and businesses north of San Luis Rey River. For intersection analysis purposes, the existing SR-76 roadway remaining after construction of the Southern Alignment Alternative was considered to be relinquished to the County, improved to County standards, and operate as local access. All intersections along the existing SR-76 alignment were calculated to operate at LOS B during AM and PM peak hours.

Between the western and eastern connection points with the existing SR-76 alignment, there would be no intersections, and the Southern Alignment Alternative would carry through traffic only. The intersections at both the western and eastern points where the Southern Alignment Alternative would meet with the existing SR-76 alignment were assumed to be signalized and were calculated to operate at LOS C in both the AM and PM peaks. In addition to the traffic volume analysis, the number and proximity within and adjacent to the project limits of signalized intersections would affect the flow characteristics of the roadway alternatives. Each roadway alternative would have six signalized intersections within the project limits (see Table 3.10-11 and Table 3.10-13 for a detailed listing of intersections). Signalized intersections were assumed at the western and eastern termini of the Southern Alignment Alternative, where the alignment would intersect with the existing SR-76 roadway, as well as at South Mission Road, Old Highway 395, and both of the SR-76/I-15 ramp intersections).

<u>No Build Alternative</u>

SR-76 Segments

Traffic volumes are expected to substantially increase from existing levels to future levels in 2015. Figure 3.10-5 shows forecasted traffic volumes for the No Build Alternative in 2015.

As shown in Table 3.10-10, all but two of the SR-76 roadway segments are calculated to degrade to LOS E or F during peak hours. These results indicate that, without any roadway improvements, segment operations would continue to break down along the current roadway.

Local Intersections

As shown in Table 3.10-11, with the exception of SR-76/South Mission Road and SR-76/Gird Road, all study area intersections would degrade to LOS E or F in the AM peak hour and LOS F in the PM peak hour under the No Build Alternative in year 2015.

I-15 Interchange Intersections

In the No Build Alternative, the SR-76 and I-15 interchange would not be modified and would continue to operate in its current diamond configuration. As shown in Table 3.10-13, all interchange intersections would operate at LOS D during peak hours.

Horizon Year 2030

Existing Alignment Alternative (Preferred Alternative)

SR-76 Segments

Figure 3.10-6 shows forecasted peak hour traffic volumes for the Existing Alignment Alternative (Preferred Alternative) in 2030. As shown in Table 3.10-15, in the year 2030 scenario, all of the SR-76 roadway segments are calculated to operate at LOS C or better for this alternative. The improved segment operation, over both the existing condition and the No Build Alternative, is due to the increased lane capacity on SR-76.

Table 3.10-15. Horizon Year 2030 SR-76 Existing Alignment Alternative (Preferred Alternative) Peak Hour Segment Operations

Street Segment	Peak Direction	Peak Hour	Year 2030 No Build			Year 2030 Existing Alignment Alternative (Preferred Alternative)		
			Volume	V/C	LOS[1]	Volume	V/C	LOS
South Mission Road to Gird Road	EB	AM	1,070	1.070	**F**	1,740	0.580	C
		PM	1,250	1.250	**F**	1,960	0.653	C
	WB	AM	1,100	1.100	**F**	1,755	0.585	C
		PM	1,060	1.060	**F**	1,625	0.542	C
Gird Road to Old Highway 395	EB	AM	1,100	1.100	**F**	1,660	0.553	C
		PM	1,200	1.200	**F**	1,835	0.612	C
	WB	AM	1,010	1.010	**F**	1,450	0.483	B
		PM	1,035	1.035	**F**	1,540	0.513	B

[1] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F.
V/C = volume-to-capacity ratio; EB = eastbound; WB = westbound

SR-76 Intersections

For the Existing Alignment Alternative (Preferred Alternative), all study area intersections would operate at LOS C or better in the year 2030, as shown in Table 3.10-16.

Intersection configurations and local street access were analyzed and designed to provide optimal sight distance and to be consistent with state and federal standards. Median openings were spaced to provide the least interference to through-traffic on SR-76 and were also evaluated to minimize out-of-direction travel to those local streets with restricted access.

As previously shown in Table 3.10-11 and Table 3.10-13, signalized intersections would be at South Mission Road, Via Monserate, Gird Road, Old Highway 395, the SR-76/I-15 southbound ramps, and the SR-76/I-15 northbound ramps. Unsignalized full access intersections are at Sweetgrass Lane and the Star Track Way/Sage Road access point, where openings in the median barrier would be provided. Ramona Drive, Calle de la Vuelta, and Monserate Hill Road would have restricted access.

For this alternative, the out-of-direction travel distance for local street access was designed to be less than approximately 1.5 miles, with most distances being closer to 1 mile (see Table 3.10-12). To enhance roadway operation and safety, acceleration and deceleration lanes along with turn pockets would be further studied and incorporated, whenever practical, during final design.

Table 3.10-16. Horizon Year 2030 SR-76 Existing Alignment Alternative (Preferred Alternative) Intersection Operations

Intersection	Peak Hour	Year 2030 No Build Alternative			Year 2030 Existing Alignment Alternative (Preferred Alternative)		
		Control Type	Delay[1] (seconds)	LOS[2]	Control Type	Delay (seconds)	LOS
SR-76/South Mission Road	AM PM	Signal	21.9 24.5	C C	Signal	27.4 31.2	C C
SR-76/Sweetgrass Lane	AM PM	TWSC[3]	86.0 108.1	**F** **F**	Unrestricted Access	20.2 18.5	C C
SR-76/Ramona Drive	AM PM	TWSC	106.5 114.1	**F** **F**	Restricted Access[4]	5.6 5.0	A A
SR-76/Calle de la Vuelta	AM PM	TWSC	87.5 108.3	**F** **F**	Restricted Access	19.8 17.5	C C
SR-76/Via Monserate	AM PM	TWSC	326.1 274.0	**F** **F**	Signal	11.4 10.1	B B
SR-76/Flowerwood Lane	AM PM	TWSC	133.7 122.1	**F** **F**	NA[5]	NA	NA
SR-76/Gird Road	AM PM	Signal	24.5 26.3	B C	Signal	19.0 24.4	B C
SR-76/Monserate Hill Road	AM PM	TWSC	76.4 96.9	**E** **F**	Restricted Access	16.5 17.5	C C
SR-76/Star Track Way	AM PM	TWSC	76.4 100.4	**E** **F**	NA	NA	NA
SR-76/Sage Road	AM PM	TWSC	76.4 100.4	**E** **F**	NA	NA	NA

[1] Average delay expressed in seconds per vehicle
[2] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F.
[3] TWSC – Two-way Stop Controlled Intersection
[4] Restricted Access = Left turns prohibited by raised median
[5] NA –Flowerwood Lane would be reconnected to Gird Road. Star Track Way and Sage Road access would be combined into a single access point.

I-15 Interchange Intersections

As shown in Table 3.10-17, the interchange intersection operations associated with a partial cloverleaf configuration are calculated to be LOS D or better at all three intersections in the interchange influence area. Interchange intersections associated with implementation of the spread diamond interchange configuration are also calculated to operate at LOS D or better. Both interchange improvement design variations would include ramp meters that would regulate the flow of traffic onto I-15 during peak hours.

Table 3.10-17. Horizon Year 2030 SR-76/I-15 Interchange Operations

Intersection	Peak Hour	Year 2030 No Build Alternative			Year 2030 Either Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative[1]		
		Control Type	Delay[3] (seconds)	LOS[4]	Control Type	Delay (seconds)	LOS
Partial Cloverleaf Interchange Configuration							
SR-76/Old Highway 395	AM PM	DNE[2]	DNE	DNE	Signal	47.0 33.2	D C
SR-76/I-15 Southbound Ramps	AM PM	DNE	DNE	DNE	Signal	50.6 46.9	D D
SR-76/I-15 Northbound Ramps	AM PM	DNE	DNE	DNE	Signal	41.2 17.5	D B
Spread Diamond Interchange Configuration							
SR-76/Old Highway 395	AM PM	Signal	42.3 47.2	D D	Signal	34.6 40.7	C D
SR-76/I-15 Southbound Ramps	AM PM	Signal	70.7 42.0	**E** D	Signal	40.5 51.9	D D
SR-76/I-15 Northbound Ramps	AM PM	Signal	34.0 39.0	C D	Signal	37.9 36.2	D D

[1] Both build alternatives would have the same interchange configuration at the I-15 interchange, and the analysis of interchange operation would be the same for either alignment alternative.
[2] DNE = Does Not Exist
[3] Average delay expressed in seconds per vehicle
[4] Bold level of service (LOS) denotes operating conditions of LOS E or LOS F

Southern Alignment Alternative

SR-76 Segments

The Southern Alignment Alternative assumes that the segment of SR-76 between the approved SR-76 Melrose Drive to South Mission Road Highway Improvement Project has been built with four lanes. Figure 3.10-7 shows forecasted traffic volumes for the Southern Alignment Alternative in 2030.

Table 3.10-18 summarizes the peak hour SR-76 segment operations for the proposed SR-76 Southern Alignment Alternative under year 2030 conditions. For V/C ratio calculations, capacities for the SR-76 Southern Alignment Alternative are based on 1,500 vehicles per hour per lane, in consideration of the continued operation of the existing SR-76 alignment as a local traffic roadway. This table shows that LOS C or better peak hour operations result in both directions with the proposed Southern Alignment Alternative.

Table 3.10-18. Horizon Year 2030 SR-76 Southern Alignment Alternative Peak Hour Segment Operations

Segment	Peak Direction	Peak Hour	Year 2030 No Build Alternative			Year 2030 Southern Alignment Alternative		
			Volume	V/C	LOS	Volume	V/C	LOS
SR-76 (Southern Alignment)	EB	AM	DNE	DNE	DNE	1,230	0.14	B
		PM	DNE	DNE	DNE	1,660	0.55	C
	WB	AM	DNE	DNE	DNE	1,180	0.39	B
		PM	DNE	DNE	DNE	1,370	0.46	B

v/c = velocity-to-capacity ratio; LOS = level of service; DNE = Does Not Exist; EB = eastbound; WB = westbound

SR-76 Intersections

As described under Year 2015 conditions, no comparable intersection analysis was performed on the Southern Alignment Alternative since the alignment would be used for through-traffic only and would not have intersections between the western and eastern connection points of the proposed frontage road.

Signalized intersections were assumed at the western and eastern termini of the Southern Alignment Alternative, where the alignment would intersect with the existing SR-76 roadway, as well as at South Mission Road, Old Highway 395, and both of the SR-76/I-15 ramp intersections.

In year 2030, the western intersection was calculated to operate at LOS D in both the AM and PM peak hours, and the eastern intersection would operate at LOS C in the AM peak hour and LOS D in the PM peak hour. The existing SR-76 alignment between the connection points would be relinquished to the County, to be improved to County standards under a separate County project, if needed, and to operate as a frontage road for local traffic access. All intersections along the existing SR-76 alignment were calculated to operate at LOS B during the AM and PM peak hours in year 2030.

I-15 Interchange Intersections

As shown in Table 3.10-13, the interchange intersection operations associated with a partial cloverleaf configuration are calculated to be LOS D or better at all three intersections in the interchange influence area. With a spread diamond configuration, all interchange intersections would also operate at LOS D or better. Both interchange improvement design variations would include ramp meters to regulate the flow of traffic onto I-15.

<u>No Build Alternative</u>

SR-76 Segments

Figure 3.10-8 shows forecasted traffic volumes for the No Build Alternative in 2030. As shown in Table 3.10-15, maintaining the capacity of the current two-lane roadway configuration along SR-76 would cause all roadway segments to degrade to LOS F during peak hours.

SR-76 Intersections

As shown in Table 3.10-16, with the exception of the signalized intersections at South Mission Road and Gird Road, all intersections would operate at LOS E or F in the AM peak hour and LOS F in the PM peak hour under the No Build Alternative in year 2030. The poor LOS at the unsignalized intersections is due to high through-traffic volumes on SR-76 that affect the critical minor street's left-turn movements. Vehicles wanting to head eastbound from these minor streets must wait a long time for gaps in SR-76 roadway traffic to complete their left turn.

I-15 Interchange Intersections

In the No Build Alternative, the SR-76/I-15 interchange would not be modified and would continue to operate in its current configuration. As shown in Table 3.10-17, most interchange intersections would operate at LOS D during peak hours, with the exception of the southbound ramps, which would operate at LOS E during the AM peak hour.

Other Environmental Consequences

Travel Times

Table 3.10-19 shows the projected time it would take a motorist to travel SR-76 from South Mission Road to Old Highway 395 under the alternatives analyzed in this EIR/EIS.

Table 3.10-19. Projected Travel Times (minutes)

Alternative	Peak Period	Existing Travel Time	2015 Travel Time	2030 Travel Time
Existing Alignment Alternative (Preferred Alternative)	Off-peak	NA	5–6	5–6
	Peak	NA	5–6	7–8
Southern Alignment Alternative	Off-peak	NA	6–7	6–7
	Peak	NA	6–7	7–8
No Build Alternative	Off-peak	7–8	–	8–9
	Peak	11–12	–	18–20

Note: Assumed distances: Existing Alignment Alternative (Preferred Alternative), 4.5 miles; Southern Alignment Alternative, 4.5 miles.
NA = not applicable

Construction Impacts

Construction activities associated with the proposed project would occur over a period of approximately 36 months, estimated to begin in 2012. Implementation of either build alternative could result in temporary disruptions to existing travel patterns due to lane restrictions, lane closures, or temporary detours that could affect residences, businesses, and motorists using this portion of SR-76.

There are multiple schools located along the SR-76 corridor that would require access during construction. Bonsall Elementary School is located south of SR-76 near the project's western terminus at 31555 Old River Road. Sullivan Middle School is located at 7350 West Lilac Road. The Bonsall Charter Academy is a distance-learning high school located adjacent to Bonsall Elementary School. Public access to all education facilities would be maintained at all times during construction.

Pedestrian and Bike Access

Sidewalks (5 feet in width) are proposed on both sides of the highway for the area around the SR-76/I-15 interchange to accommodate any pedestrian traffic. A Class III Bike Route is proposed that would provide for shared shoulder use with pedestrian, bicycle, and motor vehicle use and that is consistent with the current plan for the SR-76 corridor. Bicycle-friendly design elements would be incorporated into the final design, whenever feasible. These elements include 10-foot-wide outside shoulders, bicycle-friendly drainage systems, and bike refuge lanes at signalized intersections. The nonmotorized component of the project includes continued utilization of the existing Regional Bikeway System, the Bus Bicycle Rack program, and the Bicycle Locker program at Park and Ride lots. The proposed pedestrian and bicycle facilities would improve accessibility for these alternative modes of transportation, plus increase safety for pedestrians and bicyclists.

Sidewalks as curb ramps would be designed in compliance with California state laws and with federal ADA regulatory standards. Existing sidewalks would be maintained, upgraded as needed for accessibility, or relocated along the new roadway alignment.

This proposed project is being developed with the County of San Diego Department of Parks and Recreation to coordinate for the San Luis Rey River Park. An MOU would outline the areas of involvement between San Diego County and Caltrans. The County Park would provide locations within the proposed SR-76 project limits for a series of proposed multi-use trails, staging areas, fencing, and at-grade equestrian crossings that could be constructed during the roadway phase of this project.

Accidents and Safety

Currently, SR-76 between South Mission Road and I-15 does not meet current Caltrans design standards established by the 2006 Highway Design Manual for shoulder widths, stopping distance, or sight distance.

A review of TASAS data concluded that the higher overall accident rates of SR-76 compared to the statewide average were due to the high number of access points coupled with inadequate sight distance and narrow shoulder width. Standard shoulder widths, decreased access, barriers, and standard sight distances proposed for both alignment alternatives would improve these existing deficiencies, improving the operational characteristics of the corridor. Intersections have a higher potential for traffic conflict when compared to other highway sections. At an intersection, continuity of traffic is interrupted, traffic patterns cross, and turning movements occur. Limited at-grade signalized intersections and full access intersections are proposed within the project limits to reduce traffic conflicts and increase capacity.

Both build alternatives propose the installation of a median barrier that would separate the opposing flows of traffic. There would be openings in the barrier only at some of the intersections, while most other access points to the highway would be limited to right turns onto and off the facility. Right-turn lanes would be provided where warranted. By installing the barrier, the ability to cross the median is limited, thereby reducing the likelihood of head-on accidents by vehicles crossing the median. Elimination of some left turns would also reduce the potential for broadside type accidents typically associated with left turns. Also proposed for SR-76 are standard 10-foot-wide shoulders along the corridor, which provide more paved area for added maneuverability.

The project also proposes to provide a clear recovery zone, thereby reducing the likelihood of running off the road and hit-object accidents. A clear recovery zone is an unobstructed, relatively flat (4:1 or flatter) or gently sloping area beyond the edge of the traveled way, which affords the drivers of errant vehicles the opportunity to regain control.

As a part of the project, the interchange ramps would be widened and realigned to improve the geometrics of the ramps and improve sight distance. Both of these factors are expected to reduce the rear-end collisions occurring at this location.

3.10.4 Avoidance, Minimization, and/or Mitigation Measures

The Existing Alignment Alternative (Preferred Alternative) would impact the access to the SR-76 facility for those residents living north of SR-76 between South Mission and Old Highway 395 by adding a median barrier with limited openings for full access at specific intersections and by

proposing restricted access to three local streets and all private driveways. Restricted access would affect those residents living along Ramona Drive, Calle de la Vuelta, and Monserate Hill Road. In addition, access from Flowerwood Lane would be redirected to Gird Road and, although in its ultimate condition this access point is a full access unsignalized intersection point, access to SR-76 for Star Track Way and Sage Road would be combined into a single connection point to SR-76.

For those local streets with limited access, the out-of-direction travel for motorists would be an inconvenience, adding time and distance to their travel. To minimize this inconvenience to motorists, the Existing Alignment Alternative (Preferred Alternative) was designed to limit the distance between locations for U-turns, thus reducing the amount of out-of-direction travel required. The greatest amount of out-of-direction travel would be for motorists on Ramona Road, who would make a left turn from SR-76 eastbound and travel 0.84 mile to make a U-turn at Via Monserate, for a total of 1.68 miles of out-of-direction travel.

Because no direct impacts were identified for operation of the Southern Alignment Alternative, no associated avoidance, minimization, or mitigation measures are proposed.

Under the No Build Alternative, traffic operating conditions would continue to degrade as future traffic volumes increase on SR-76 and local roadways. Most peak hour operations along SR-76 segments and intersections in both year 2015 and year 2030 would degrade to LOS E or F. Local roadway segments are forecast to operate at acceptable levels because they would be built to current Caltrans design standards, thereby increasing capacity and operating conditions. Avoidance, minimization, or mitigation of the poor future traffic operating conditions along SR-76 segments and intersections associated with increased traffic congestion under the No Build Alternative is not considered feasible, as mitigation would require modifications to the existing facilities.

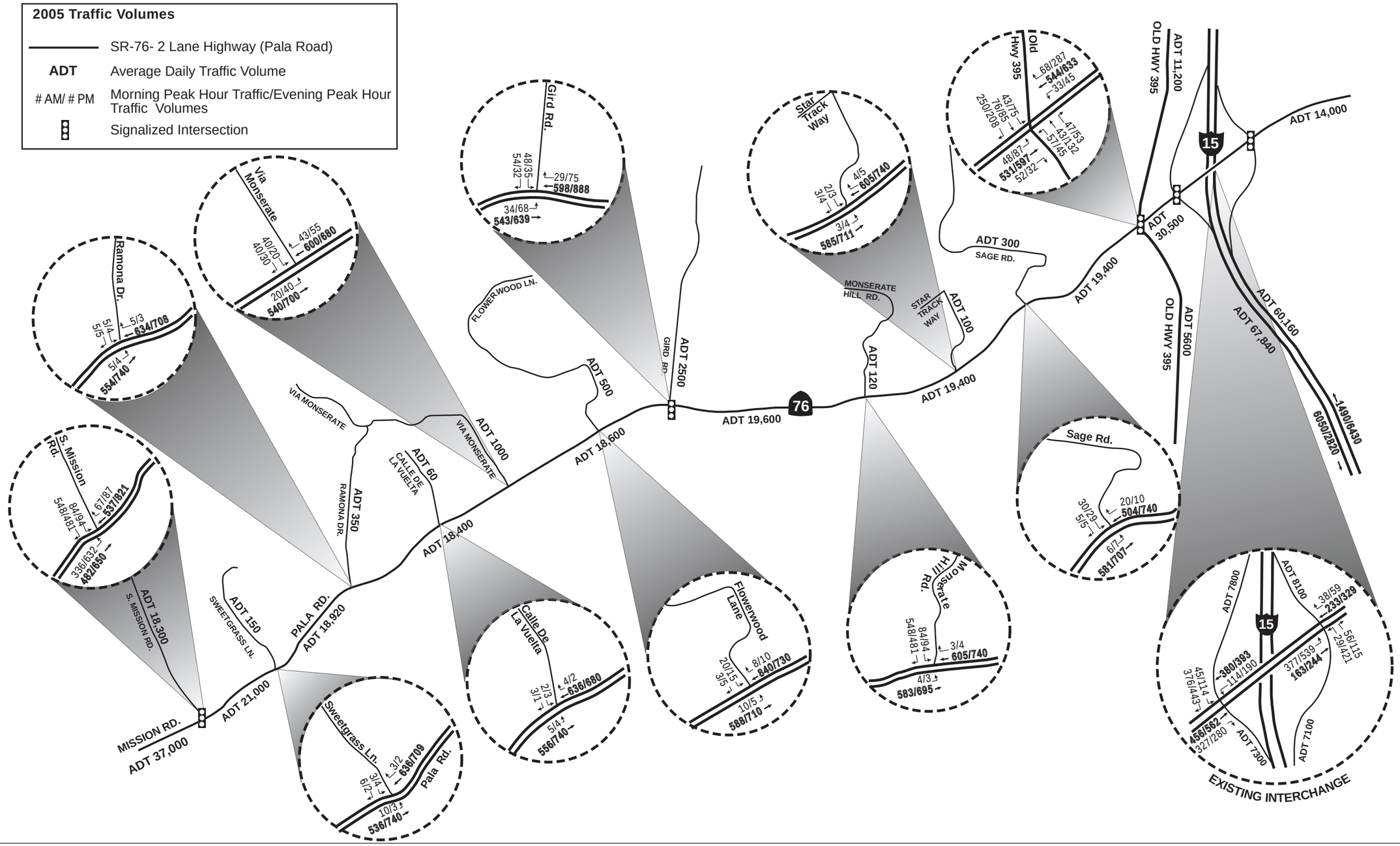
Construction-Related Measures

Construction activities associated with the proposed project could result in temporary disruptions to existing travel patterns near the proposed project, primarily along the existing SR-76 roadway. Construction-related impacts to traffic and circulation associated with the Southern Alignment Alternative would be limited to those areas along the existing SR-76 roadway that are common to both alternatives. Temporary lane restrictions, lane closures, or detours associated with the construction process could negatively affect residences, businesses, and motorists within the surrounding community. Construction of the Existing Alignment Alternative (Preferred Alternative) would create the most disruption to local residences and businesses along SR-76.

During construction, there would be at least one lane maintained in each direction of travel along the existing SR-76 alignment. If necessary, this could include temporary stoppages, the use of pilot cars, reduced lane widths, reduced allowable speeds, rough surfaces, or small locations where there is a need for a detour around localized construction activities. Also, it may be necessary to temporarily close (10 to 20 minutes) the road and stop traffic during off-peak hours to allow for construction activities. Closures requiring a more extended period of time would be completed in the evening, early morning, over weekends, and at other off-peak times when traffic volumes would be low to allow rerouting. If necessary, temporary detours would include the use of County roads. Due in part to limited parallel routes, detours onto County roads would be short term. Access to the various intersections along the alignment would also be maintained.

The following measures would help to minimize inconveniences resulting from traffic delays during construction of either build alternative and inform the public about traffic interruptions and construction status:

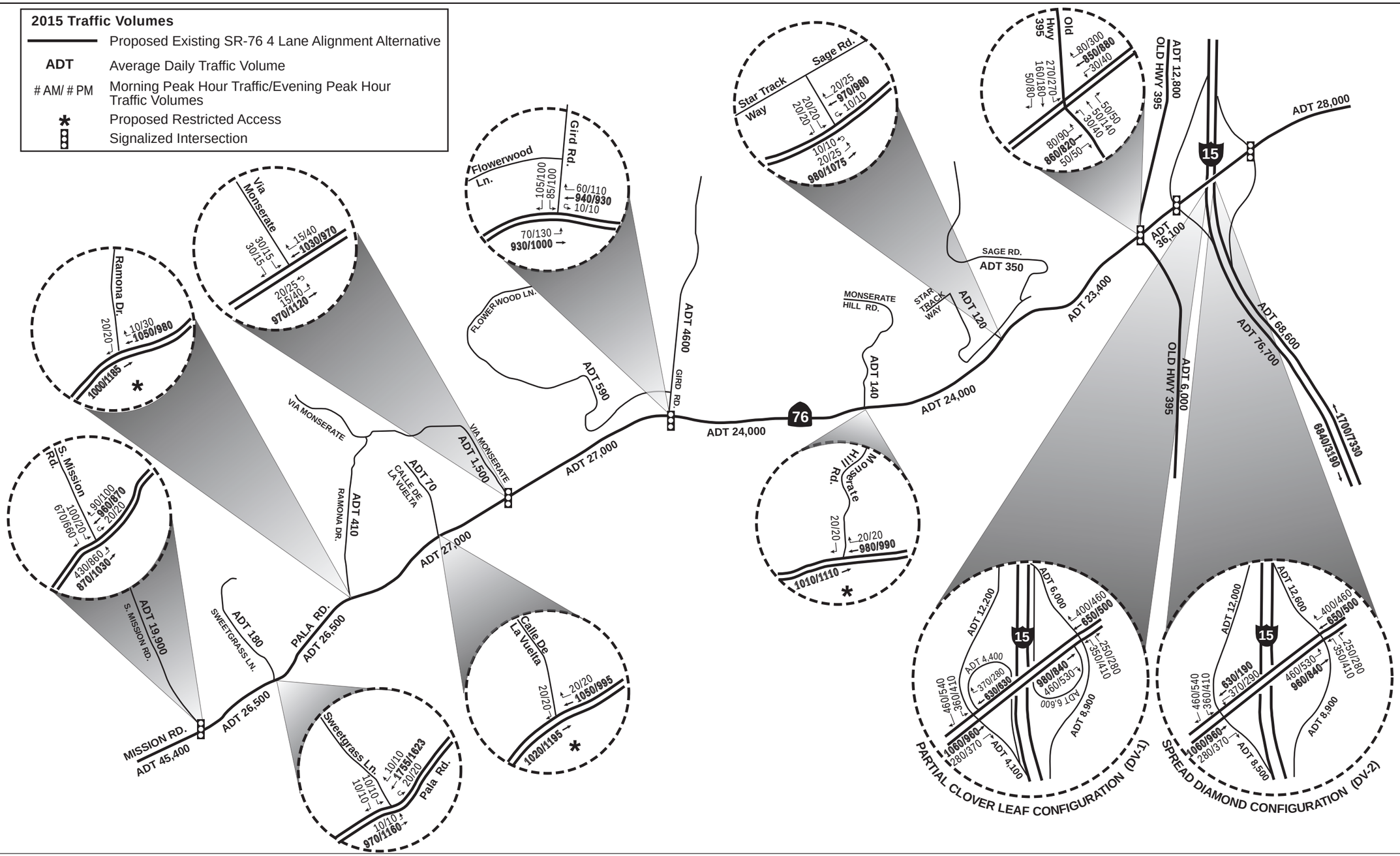
- Preparation of a Transportation Management Plan (TMP) to help identify strategies for alleviating or minimizing work-related traffic delays.
- A public awareness program would be developed to inform the public of the upcoming detours and construction schedule.
- Emergency providers (fire, police, and medical) would be informed of all detours.
- Construction signage, signalization, or flag-persons would be used during construction in areas with pedestrian access.



Source: Linscott Law & Greenspan 2009

NOT TO SCALE

Figure 3.10-2
Existing Traffic Volumes



Source: Linscott Law & Greenspan 2011

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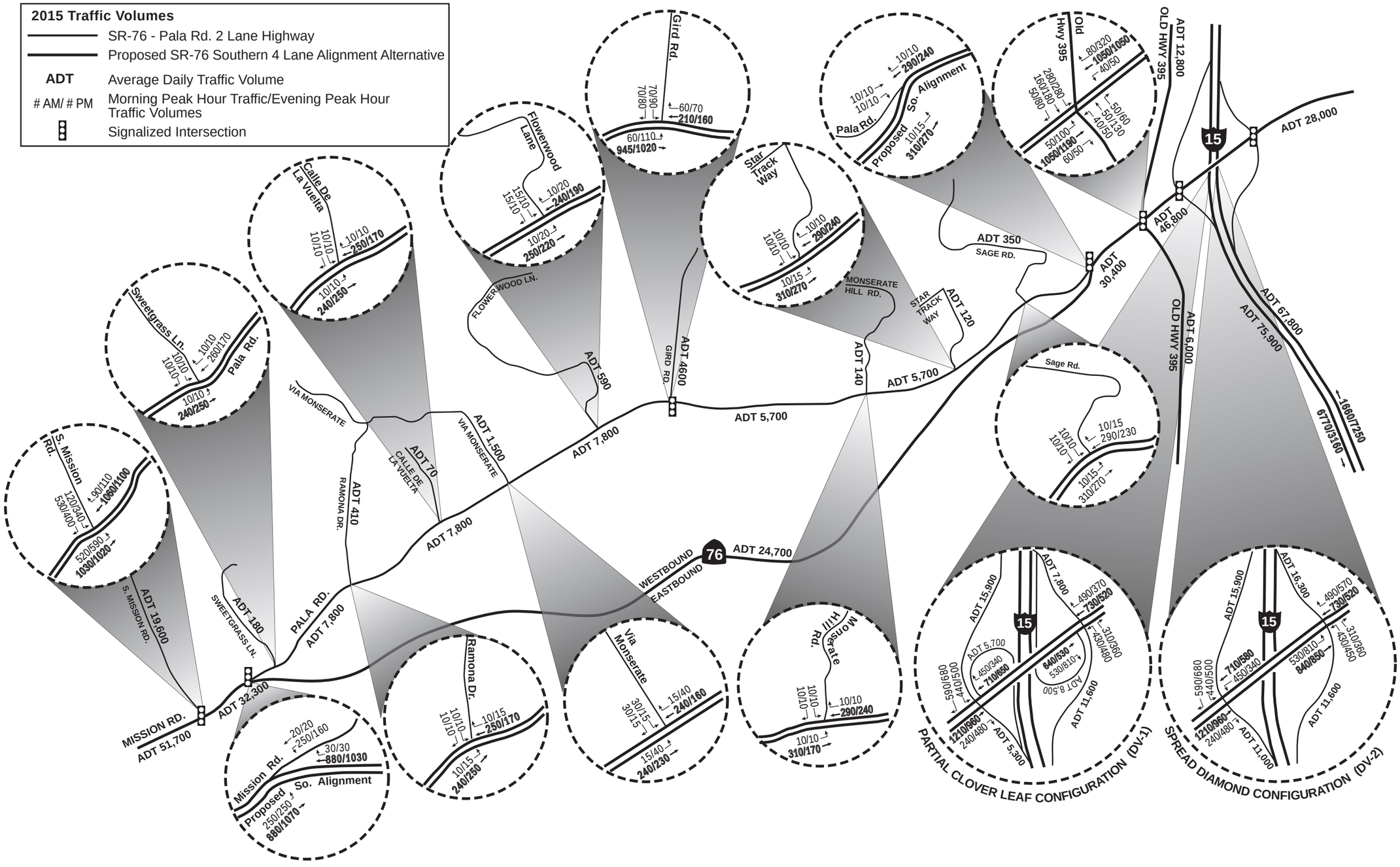
Figure 3.10-3

Forecasted Traffic Volumes - Existing Alternative - 2015 (Preferred)

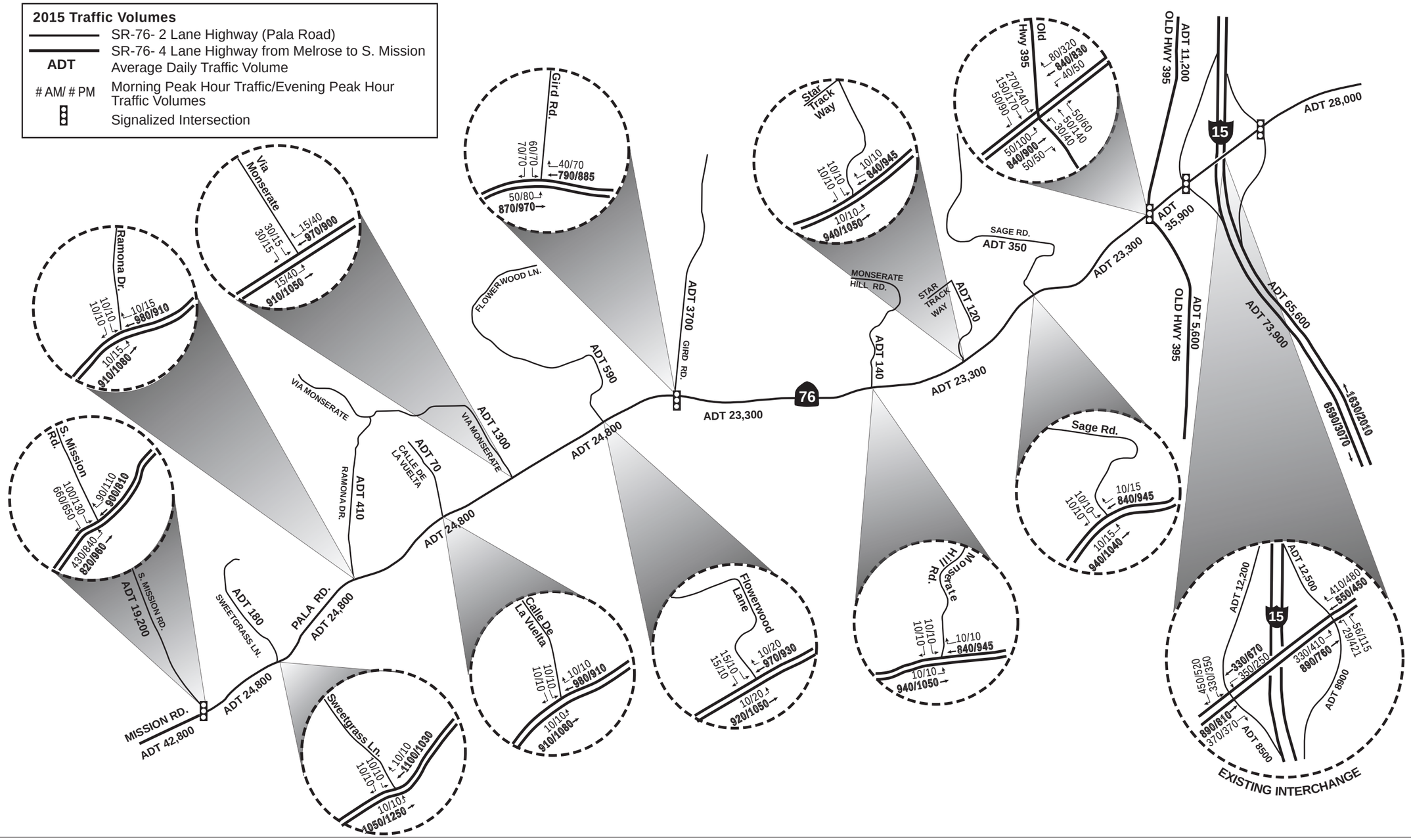


Source: Linscott Law & Greenspan 2009

NOT TO SCALE

Figure 3.10-4

Forecasted Traffic Volumes - Southern Alignment Alternative - 2015

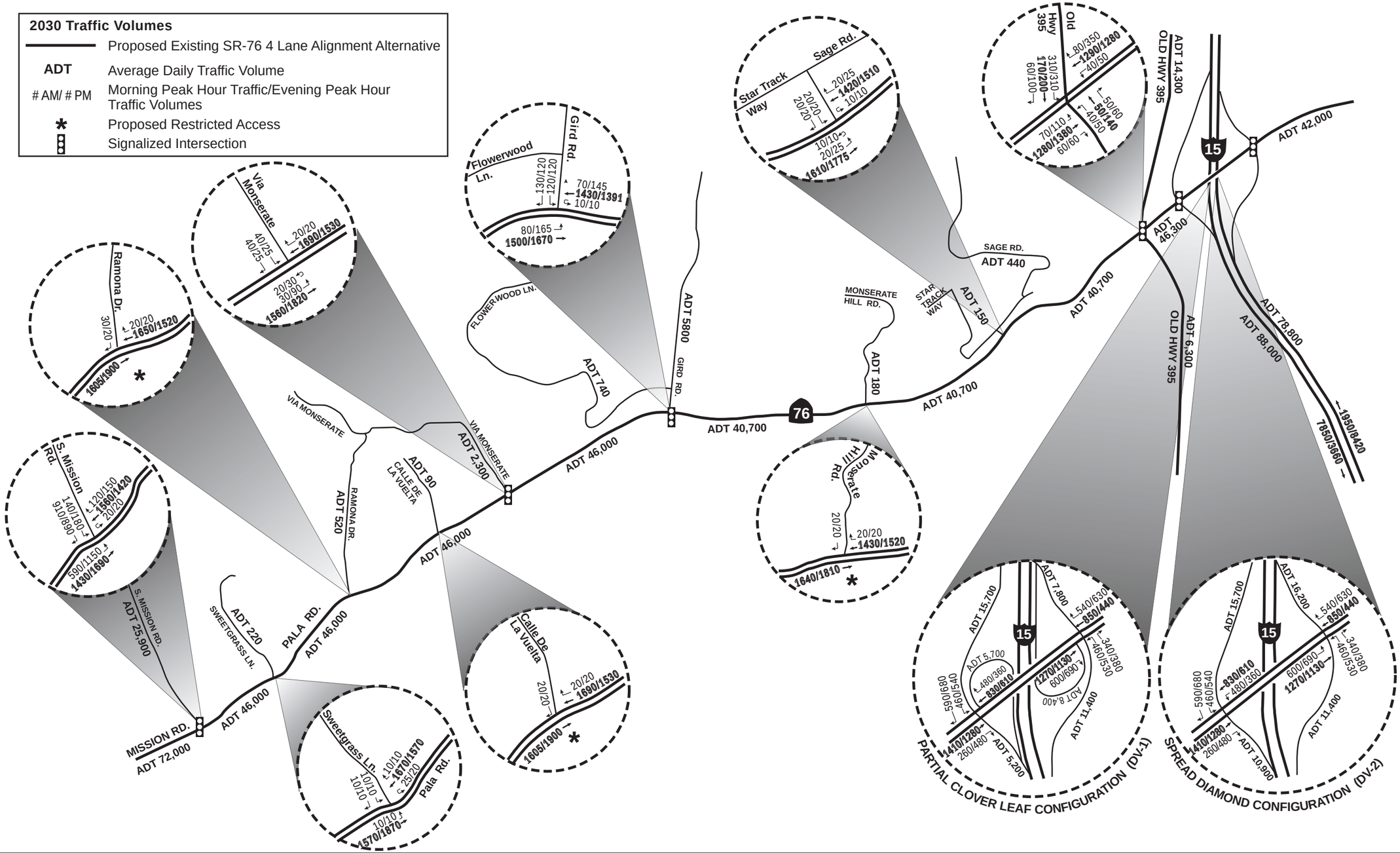


Source: Linscott Law & Greenspan 2009

NOT TO SCALE

Figure 3.10-5

Forecasted Traffic Volumes - No Build Alternative - 2015



Source: Linscott Law & Greenspan 2011

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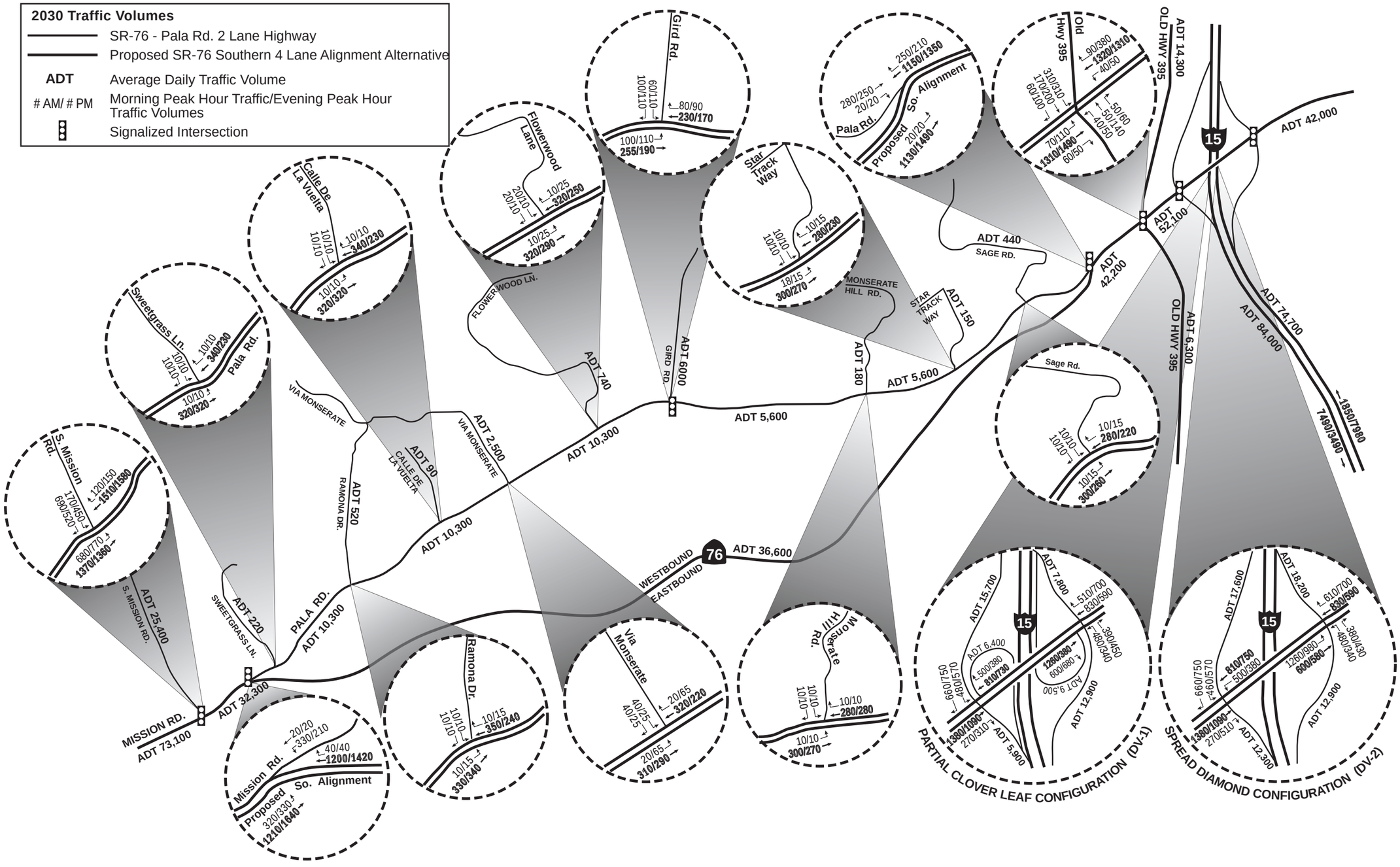
Figure 3.10-6

Forecasted Traffic Volumes - Existing Alternative - 2030 (Preferred)

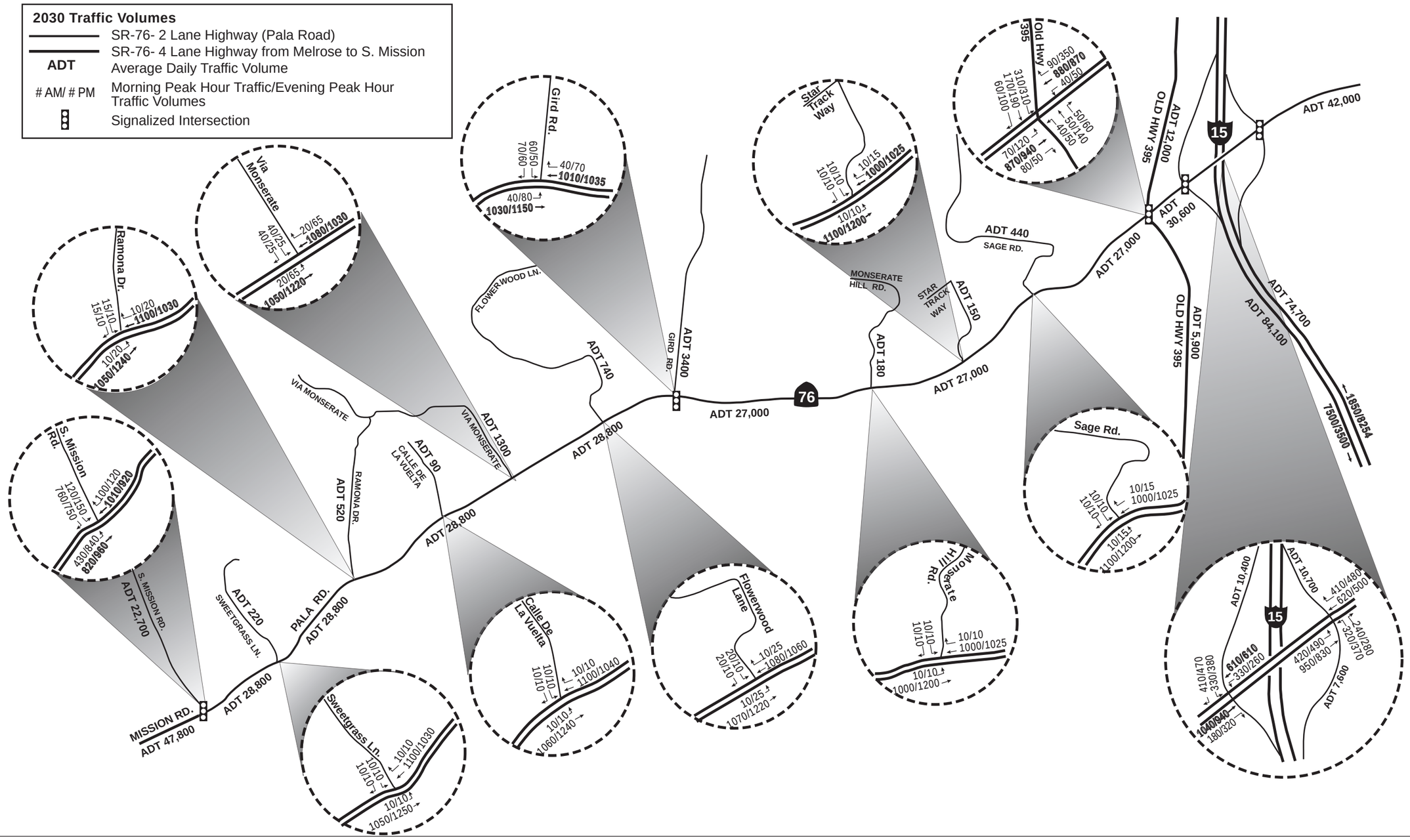


Source: Linscott Law & Greenspan 2009

NOT TO SCALE

Figure 3.10-7

Forecasted Traffic Volumes - Southern Alignment Alternative - 2030



Source: Linscott Law & Greenspan 2009

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Figure 3.10-8

Forecasted Traffic Volumes - No Build Alternative - 2030

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3.11 VISUAL/AESTHETICS

The Visual Impact Assessment (VIA), a separate technical study prepared in May 2010, serves as the basis for this analysis of impacts to aesthetics.

3.11.1 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]). To further emphasize this point, 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, 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 Section 21001[b]).

3.11.2 Affected Environment

The six principal steps required to assess visual impacts were performed:

A. Define the project setting and viewshed.
B. Identify key views for visual assessment.
C. Analyze existing visual resources and viewer response.
D. Depict the visual appearance of project alternatives.
E. Assess the visual impacts of project alternatives.
F. Propose methods to mitigate adverse visual impacts.

The methodology used to assess visual impacts followed the USDOT, FHWA Visual Impact Assessment for Highway Projects. The methodology and key terms are summarized below.

Identify Visual Character – Visual character is descriptive and qualitative, which means it is based on defined attributes that are neither good nor bad in themselves. 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. If there is public preference for the established visual character of a regional landscape and resistance to a project that would contrast that character, then changes in the visual character can be evaluated.

Assess Visual Quality – Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

> **Vividness** is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

Intactness is the visual integrity of the natural and human-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.

Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual human-made components in the landscape.

Project Setting

The landscape composition in this area of north San Diego County contributes to the scenic experience along SR-76. The topography varies between flat broad river valley, rolling hills, and relatively steep slopes with exposed granite outcroppings. Native vegetation consists primarily of coastal sage scrub on the hillsides and riparian communities associated with the San Luis Rey River bed. Other vegetation includes fruit orchards, eucalyptus, and a variety of ornamental plants associated with commercial and residential developments. Due to this existing scenic experience along SR-76, the existing SR-76 alignment is currently eligible for Scenic Highway Designation by the State of California.

The visual setting of the immediate project area is primarily characterized by a rural to semirural environment and varies with the nearby land-use type. Single-family residential neighborhoods, consisting mainly of large single-family homes, can be seen in the surrounding hills north of SR-76. In addition to the residential neighborhoods, there are steep hillsides along the north side of SR-76 between Gird Road and Old Highway 395. The area immediately south of SR-76 is primarily characterized by open space and includes dense vegetation associated with the San Luis Rey River bed and a large grassland area in the San Luis Rey River Valley. South of the river valley there are steep hillsides with single-family residences located at the top. Additional residential development and a ranch are located in the river valley. Commercial developments include the River Village Shopping Center at the intersection of SR-76 and South Mission Road, and a gas station and restaurant at the intersection of SR-76 and Old Highway 395. I-15, a regional transportation corridor, is located east of Old Highway 395 and generally runs in a north/south direction. Overall, the project area has a semirural appearance.

Project Viewshed

A viewshed is composed of all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views located from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by proposed project features. Figure 3.11-1 depicts the viewshed of the proposed project.

<u>Existing Alignment Alternative (Preferred Alternative)</u>

For this proposed project, the viewshed is the landscape that is visible from the areas surrounding the proposed Existing Alignment Alternative (Preferred Alternative), which follows primarily along SR-76 between South Mission Road and I-15. It would also include the few single-family homes on the hillsides adjacent to the north side of SR-76, and the private residence on the south side of SR-76 and west of Old Highway 395, from which the Existing Alignment Alternative (Preferred Alternative) may be viewed after construction. A small number of single-family homes on the hillsides south of the San Luis Rey River Valley would also have

views of the altered and graded hillsides along SR-76. The viewshed would also include the two commercial areas along SR-76 near South Mission Road and Old Highway 395.

Southern Alignment Alternative

For the Southern Alignment Alternative, the viewshed is the landscape that primarily crosses the San Luis Rey River Valley approximately between South Mission Road and I-15. Single-family homes in the neighborhoods up on the hillsides adjacent to the north side of SR-76 and a few single-family homes on the hillsides south of the San Luis Rey River Valley would also have distant views of the proposed Southern Alignment Alternative traversing through the valley after construction. The viewshed would also include the two commercial areas along SR-76 near South Mission Road and Old Highway 395.

Key Views

Because it is not feasible to analyze all of the views from which the proposed project would be seen, it is necessary to select a number of key viewpoints that would most clearly represent the visual effects of the proposed project. Key views also represent the primary viewer groups that would potentially be affected by the proposed project. Each key view below is described and evaluated for its existing and proposed change to visual quality and character, probable view response, and resulting visual impact.

Key views are often considered within the context of 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. Where applicable, landscape subunits are included to describe unique conditions within a landscape unit. Landscape subunits further define the visual character and influence the visual experience within the landscape unit. Seven unique landscape units, and two landscape subunits, were identified within the project study area. The following landscape units are shown in Figure 3.11-1:

- Rural Landscape Unit
    - Commercial Landscape Subunit
- San Luis Rey River Basin Landscape Unit
- Northern Hillside Landscape Unit
- Pastoral Landscape Unit
    - Vessels Stallion Farm Landscape Subunit
- Southern Hillside Landscape Unit
- Transitional Landscape Unit
- I-15 Interchange Landscape Unit

The following is a discussion of the key views identified for the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative.

Ten views indicative of the visual effects of project implementation in various areas were selected to represent views by the primary viewer groups. These views are shown in Figure 3.11-1.

Key View 1 – Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

This key view looks east along SR-76 at the intersection of SR-76 and South Mission Road and is located within both the Rural Landscape Unit and the Commercial Landscape Subunit. This view is representative of what motorists experience while traveling east on SR-76. Existing character in this location is defined by mature riparian vegetation, traffic signals, signage and a suburban shopping center. The San Luis Rey River basin is located to the south, and the River Village Shopping Center is located adjacent to the north side of SR-76 and east of South Mission Road. The dominant landscape features are the commercial shopping center and the dense vegetation within the floodplain area. The existing visual quality and character are low. Figure 3.11-2a depicts the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative Key View 1.

Key View 2 – Existing Alignment Alternative (Preferred Alternative)

This key view faces west along the existing SR-76 alignment approaching Ramona Drive from Calle de la Vuelta and is located within the Rural Landscape Unit. This view is representative of what motorists experience while traveling west on the current SR-76 alignment. Views in this area are constrained by topography and dense vegetation and the existing visual character is defined primarily by rolling topography, native vegetation, and isolated pockets of ornamental plantings. The dominant landscape features are the dense vegetation of the San Luis Rey River basin and the steep hillside along the north side of SR-76. The existing visual quality and character are moderate. Figure 3.11-3a depicts the Existing Alignment Alternative (Preferred Alternative) Key View 2.

Key View 3 – Southern Alignment Alternative

This key view faces southeast across the valley from the edge of the river basin south of the San Luis Rey River and is located within the San Luis Rey River Landscape Unit and the Pastoral Landscape Unit. This view is representative of what recreational users in the San Luis Rey River basin experience along the proposed route of the Southern Alignment Alternative. The existing character in this location is defined by open expanses of grassland pastures delineated by wooden fences and private driveways lined with mature trees. Views in this location are generally unobstructed and distant, and encompass the entire valley. The dominant landscape features in this view are the mature trees and fence-lined open fields, and hillsides to the south and east of the project area. The level of existing visual quality and character is moderately high to high in this location. Figure 3.11-4a depicts the Southern Alignment Alternative Key View 3.

Key View 4 – Southern Alignment Alternative

This key view looks south across the river valley from residential homes located on Via Monserate and is located within the Northern Hillside Landscape Unit. This key view illustrates the view of the Southern Alignment Alternative traversing the undeveloped land from across the valley in the hillside residential development to the north of the current SR-76 alignment. The existing character of the current views from this location is defined by grassy paddocks and densely vegetated hillsides. The dominant landscape features include the mature riparian trees that densely populate the river basin; vegetation; the open, undeveloped land on Vessels Stallion Farm; and hills to the south of the valley. The level of existing visual quality and

character is moderate to moderately high in this location. Figure 3.11-5a depicts the Southern Alignment Alternative Key View 4.

Key View 5 – Existing Alignment Alternative (Preferred Alternative)

This key view looks east along SR-76 approaching the deviation in the current SR-76 roadway at Gird Road and is located within the Rural Landscape Unit. This view is representative of what motorists experience while traveling east on SR-76. The existing character in this location is defined by mature riparian vegetation to the south and isolated pockets of manicured landscapes to the north of SR-76. The San Luis Rey River Valley is located to the south, and steep hillsides with vegetation are located along the north side of SR-76. There are single-family homes visible from SR-76 on the hillsides, but views from these locations are typically obstructed by the topography and/or vegetation. The dominant landscape features are the dense vegetation from the riverbed and the steep hillsides along the north side of SR-76. The existing visual quality and character are moderate in this location. Figure 3.11-6a depicts the Existing Alignment Alternative (Preferred Alternative) Key View 5.

Key View 6 – Southern Alignment Alternative

This key view looks west across the river valley from the river valley floor, and is located within both the Pastoral Landscape Unit and the Vessels Stallion Farm Landscape Subunit. This view is representative of existing conditions along the proposed route of the Southern Alignment Alternative. The existing character in this location is defined by open expanses of grassy paddocks lined with wooden fences, and dense and mature vegetation lining the private driveways and the boundaries of the property. Views in this location are generally unobstructed and encompass the entire valley. The San Luis Rey River and SR-76 are located to the north and densely vegetated hillsides are to the south. The dominant landscape features are the mature trees and fence-lined open fields. The visual quality and character are moderately high to high in this location. Figure 3.11-7a depicts the Southern Alignment Alternative Key View 6.

Key View 7 – Existing Alignment Alternative (Preferred Alternative)

This key view faces south on Gird Road toward the San Luis Rey River bed and is located within the Northern Hillside Landscape Unit. This view is representative of what motorists experience facing south at the intersection of Gird Road and the existing SR-76. The land surrounding the intersection is heavily vegetated by mature riparian vegetation to the east and south. The view corridor is heavily constrained by large plant material and topography, and distant view opportunities are limited in this location. The level of existing visual quality and character is moderate in this location. Figure 3.11-8a depicts the Existing Alignment Alternative (Preferred Alternative) Key View 7.

Key View 8 – Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

This key view looks west across private property in the San Luis Rey River bed located south of SR-76 near Star Track Way and is located within the Transitional Landscape Unit. This view is representative of the existing conditions at this location. Views of the San Luis Rey River Valley and hills to the south are generally obstructed, but some viewing opportunities are framed by mature vegetation in this location. The existing character is generally defined by mature vegetation and expanses of native grasses. The dominant landscape features are the vegetated riverbed, the surrounding hillsides south of the San Luis Rey River bed, and the associated

valley. The level of existing visual quality and character is moderate in this location. Figure 3.11-9a depicts Key View 8.

Key View 9 – Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

This key view looks east from SR-76 toward the intersection at Old Highway 395 and the SR-76 overcrossing at I-15 and is located within the I-15 Interchange Landscape Unit. This view is representative of what motorists experience while traveling east on SR-76 and driving to and from the areas located to the east and west of the proposed project site along SR-76. I-15 is located to the north and south as drivers approach the interchange. This area is a relatively open area with a transportation corridor surrounded primarily by undeveloped and vegetated hillsides. Viewers in this location experience distant and unobstructed views to the mountains in the east as they approach the intersection. The dominant landscape features in this view are the mountain vistas in the distance and the existing I-15 interchange. The existing visual quality and character are low to moderate. Key View 9 is depicted in Figure 3.11-10a.

Key View 10 – Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

This key view looks north from I-15 toward the SR-76 and I-15 interchange and is present within the I-15 Interchange Landscape Unit. This view is representative of what motorists experience while traveling on I-15 and driving to and from the areas located to the east and west of the proposed project site along SR-76. The transportation corridor is relatively open and surrounded primarily by undeveloped and vegetated hillsides. There are some single-family residences located on either side of I-15 in the surrounding hillsides. The dominant landscape features include the transportation corridor, the hills to the west of I-15, and the mountain range to the east. The existing visual quality and character are low to moderate. The Park and Ride facility is a common element to both alignment alternatives and introduces a substantial amount of paving and lighting to the project area. Figure 3.11-11a depicts Key View 10.

Existing Visual Resources and Viewer Response

Existing Visual Character

The existing visual character of the project area is a combination of natural and constructed elements that range from relatively undisturbed riparian vegetation to a small number of commercial uses and single-family residences in the surrounding hillside neighborhoods. The primary character includes the rural landscape with a large river valley, large-lot residential development, and small commercial activity nodes. Mature vegetation, along with pronounced landforms, contributes to a rural and scenic landscape that is tied together by the river valley and the gently winding highway itself.

Existing Visual Quality

The area to the west has a moderate level of visual quality due to the more level topography and presence of limited commercial development at the intersection of SR-76 and South Mission Road. The unity, intactness, and vividness are moderate due to the lack of strong memorable landscape features in this area. The San Luis Rey River bed and associated valley have a high visual quality due to the large area of open space and distant views of the foothills to the south. These features possess a higher level of intactness, unity, and vividness. The

single-family homes located along the northern hillsides between Sweetgrass Lane and Gird Road are not densely located and create a semirural character. The unity, intactness, and vividness are moderate to high, due to the memorable landscape features in this area. The steep hillsides along the north side of SR-76 between Gird Road and Highway 395 are a prominent landform. The visual quality of this natural feature is high, as it possesses a high level of intactness, unity, and vividness. The eastern portion of the project area has a moderate level of visual quality due to the more level topography along the I-15 corridor at the interchange with SR-76. The unity, intactness, and vividness are moderate due to the lack of strong memorable landscape features in this area.

Viewer Response

Four general viewer groups were considered for the evaluation of viewer exposure, awareness, and response: motorists, residents, local business employees and customers, and recreational users.

Motorists on SR-76 would have extended exposure and awareness of the proposed project's changes to existing roadway features and graded slopes with the Existing Alignment Alternative (Preferred Alternative) and the relocation of the alignment with the Southern Alignment Alternative. Motorists traveling on and near I-15, or on local roads near SR-76, would typically have a high awareness of the proposed project, but their exposure to the project would be of short duration.

Community residents immediately adjacent to the proposed project site have direct foreground views of the site, but are few in number. A small number of the surrounding residents have midground views; however, these views are limited depending on their location and the distance from the proposed project site. A majority of the residents located on the northern slope adjacent to the Existing Alignment Alternative (Preferred Alternative) would have obstructed views, as there is a substantial grade change visually separating them from the roadway. These same residents would have midground views of the Southern Alignment Alternative traversing the San Luis Rey River Valley.

Employees and customers frequenting local businesses where SR-76 intersects both South Mission Road and Old Highway 395 would experience a direct foreground view of the proposed project. However, from these areas, the views would be of short duration, and viewers would likely have a moderate-to-low awareness of the proposed project.

Recreational users use trails located to the north of the San Luis Rey River bed south of SR-76, and in the hills to the south of the river valley. Additional trails are planned in these areas. These trails would be used by hikers, joggers, equestrians, and bicyclists. Although existing and proposed trails would be near the alignment alternatives, the dense and mature vegetation would obstruct views of these alignment alternatives by recreational users.

3.11.3 Environmental Consequences

The visual impacts of proposed project alternatives are determined by assessing the visual resource change in the key view areas due to the proposed project, and then predicting viewer response to that change.

Visual resource change is the sum of the change in visual character and change in visual quality. The first step in determining visual resource change is to assess the compatibility of the

proposed project with the visual character of the existing landscape. The second step is to compare the visual quality of the existing resources with projected visual quality after the project is constructed.

The viewer response to project changes is the sum of viewer exposure and viewer sensitivity to the project as determined in the preceding section. The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change.

Key View 1A – Existing Alignment Alternative (Preferred Alternative)

The proposed project features for the Existing Alignment Alternative (Preferred Alternative) in this location include widening the existing alignment to accommodate additional through and turn lanes, substantial fill and grading, and removal of mature riparian vegetation in the river basin.

The Existing Alignment Alternative (Preferred Alternative) would widen and improve the operational configuration of the existing SR-76 and South Mission Road intersection. These proposed improvements would constitute a noticeable change; however, the design of these improvements would be a part of the anticipated built environment and would not be out of place or represent an extreme change in community setting. These changes to the visual character and quality would be low to moderate. Figure 3.11-2b simulates the proposed improvements for Key View 1A.

These changes to the views would be apparent to passing motorists and nearby business employees and patrons. Motorists traveling along SR-76 on a daily basis would experience short-duration foreground views of the Existing Alignment Alternative (Preferred Alternative). Local residents also use SR-76 to enter and exit the surrounding neighborhoods on a daily basis and would experience short-duration foreground views of the Existing Alignment Alternative (Preferred Alternative). Sensitivity to this change in visual environment would likely be low to moderate, as this segment of the Existing Alignment Alternative (Preferred Alternative) would improve an existing roadway and follow the existing SR-76 roadway. Overall viewer response would be low to moderate.

The resulting visual impact would be low to moderate.

Key View 1B – Southern Alignment Alternative

The proposed project features for the Southern Alignment Alternative in this location include widening the existing alignment to accommodate additional through and turn lanes, substantial grading, bridge construction, and removal of mature riparian vegetation in the river basin. The full alignment would be elevated above the existing surrounding grade on fill.

The Southern Alignment Alternative would shift the roadway alignment to the riverbed located south of SR-76. This would be a considerable change, as a new transportation corridor would be introduced at this particular location. However, with this shift south of the existing SR-76 roadway, the location of the Southern Alignment Alternative would open up the view to the San Luis Rey River bed and mountains to the east. Grading, bridge construction, and vegetation removal required to construct the Southern Alignment Alternative would be a noticeable change in this area. These changes to the community's visual character and quality would be high. Figure 3.11-2c simulates the proposed improvements for Key View 1B.

Changes to the views would be apparent to passing motorists and nearby residents. Motorists traveling along SR-76 on a daily basis would experience short-duration foreground views of the Southern Alignment Alternative. Local residents and nearby business employees and patrons use SR-76 to enter and exit the surrounding area on a daily basis and would experience short-duration foreground views of the proposed improvements, but it would not be a main focus of their activities. Although some recreational trails are located in the San Luis Rey River bed, the Southern Alignment Alternative would not be the dominant feature along the trails or be viewed on a constant basis. Sensitivity to this change in visual environment would likely be moderate to moderately high, as this segment of the Southern Alignment Alternative would introduce a roadway at a new location and open up a less obstructed view to the west. Overall viewer response would be moderate.

The resulting visual impact would be moderate.

Key View 2 – Existing Alignment Alternative (Preferred Alternative)

The proposed project features for the Existing Alignment Alternative (Preferred Alternative) from this location include a four-lane highway, 30-foot-average-width median with concrete barrier, extensive landform alteration consisting of a large cut slope to the north, and fill slopes to the south of this location. Overall corrections in roadway geometry would set the alignment south, partly into the river basin.

While the Existing Alignment Alternative (Preferred Alternative) generally follows the current SR-76 corridor, the proposed project would widen the existing corridor alignment and straighten many of the curves of the existing SR-76 roadway. The steep hillside immediately north of this location would require alteration to accommodate these roadway improvements. The proposed cut slope would introduce a considerable change to the currently undeveloped hillsides. These changes would be noticed by motorists traveling along SR-76 and by residents in the vicinity of Ramona Drive and Calle de la Vuelta. Landform alteration would provide more distant and open views along the corridor but would also remove some privately owned orchard plantings on the western side of the slope. Although this view would be fleeting, most travelers would likely focus their attention on the altered hillsides. These landform changes would also be apparent from the single-family residences located along the ridgeline of the hillsides south of the river valley. The views from these residences span the entire valley and the hillsides north along SR-76, which would include manufactured cut slopes for the Existing Alignment Alternative (Preferred Alternative). Figure 3.11-3b simulates the proposed improvements for Key View 2.

Changes to this view would affect motorists traveling along SR-76. They would experience short-duration foreground views of the improved roadway and altered hillsides. These changes to the views of the altered hillsides would be apparent to passing motorists and hilltop residences across the valley to the south. The proposed improvements and modified hillsides would be a noticeable change in the foreground but would not be subject to long-duration views. However, the altered hillsides and expansion of the roadway facility into the river basin would open up the view to the west and allow a less obstructed view to the distant hillsides south of the San Luis Rey River. Residences located on the ridge along the hillsides south of the river valley would not notice a change in the Existing Alignment Alternative (Preferred Alternative) improvements, but, rather, would notice the altered hillsides in the middle-ground view. Sensitivity to this change in visual environment would likely be moderately high, as the Existing Alignment Alternative (Preferred Alternative) would be widening and replacing an existing roadway, regrading steep hillsides with existing orchard plantings, and opening a less obstructed view to the west.

The resulting visual impact would be moderately high.

Key View 3 – Southern Alignment Alternative

The project proposes to introduce a new transportation corridor into previously undeveloped land. Project features visible from this location include a four-lane highway, 30-foot-average-width median with concrete barrier, substantial grading, and removal of some mature trees. The full alignment would be elevated above the existing surrounding grade on fill; at the intersection of Dulin Road, the roadway would become grade separated to allow a north/south undercrossing.

The proposed project would constitute a dramatic change to existing visual quality and character as a new transportation corridor would be introduced through this location. Imported fill required to elevate the roadway would both physically and visually bisect the landscape, disrupting the intactness and continuity of the visual experience. Additional roadway elements, including signage, guardrails, reflectors, and rock slope protection (RSP), would add additional contrast to the existing rural character of the visual setting. The Southern Alignment Alternative would also require the relocation of Vessels Stallion Farm, constituting a substantial change to the existing character of the project area. As a result of these factors, the changes to the existing visual character and quality would be high. Figure 3.11-4b simulates the proposed improvements for Key View 3.

Proposed changes to existing visual quality and character would be apparent to recreational users using the trails within the San Luis Rey River basin. Viewers would experience long-duration foreground views of the elevated project. Sensitivity to this change in visual environment would likely be high, as this segment of the Southern Alignment Alternative would introduce a roadway at a new location on fill and would obstruct distant views and the overall continuity of the visual setting.

The resulting visual impact would be high.

Key View 4 – Southern Alignment Alternative

The project proposes to introduce a transportation corridor into previously undeveloped land. The proposed project features for the Southern Alignment Alternative in this location consist of a four-lane highway, 30-foot-average-width median with concrete barrier, moderate grading and fill, and minor vegetation removal. The full alignment would be elevated above the existing surrounding grade on fill.

The proposed project would shift the roadway alignment south of the San Luis Rey River. This would be a dramatic change, as a new transportation corridor would be introduced through this location. Grading, fill, and vegetation removal required to construct the Southern Alignment Alternative would be visible in this area. Although the proposed project would not be viewed on a constant basis by residents, it would be a noticeable change to existing character. These changes to the community's visual character and quality would be moderate. Figure 3.11-5b simulates the proposed improvements for Key View 4.

Changes to the views would be apparent to surrounding residents in the hillsides to the north of SR-76 and south of the river valley. Motorists traveling along SR-76 on a daily basis would experience short-duration foreground views of the Southern Alignment Alternative. Local residents use current SR-76 to enter and exit the surrounding neighborhoods on a daily basis

and would experience short-duration foreground views of the Southern Alignment Alternative. Sensitivity to this change in visual environment would likely be moderate to high, as this segment of the Southern Alignment Alternative would introduce a roadway at a new location. Overall viewer response would be moderate.

The resulting visual impact would be moderate.

Key View 5 – Existing Alignment Alternative (Preferred Alternative)

The proposed project features for the Existing Alignment Alternative (Preferred Alternative) in this location include a four-lane highway, 30-foot-average-width median with concrete barrier, fill in the river basin, severe grading of surrounding slopes, and vegetation removal. Utility poles would also be realigned or placed underground.

Changes to the existing visual quality would result in a considerable change, as a new transportation corridor would be introduced at this particular location. The proposed project would shift the alignment to the San Luis Rey River bed located south of SR-76. Additionally, substantial fill and grading and vegetation removal required to construct the Existing Alignment Alternative (Preferred Alternative) would be clearly visible in this area. These changes to the community's visual character and quality would be moderate to moderately high. Figure 3.11-6b simulates the proposed improvements for Key View 5.

Changes to the views would be apparent to passing motorists and nearby residents. Motorists traveling along SR-76 on a daily basis would experience short-duration foreground views of the Existing Alignment Alternative (Preferred Alternative). Local residents use SR-76 to enter and exit the surrounding neighborhoods and would experience short-duration foreground views of the Existing Alignment Alternative (Preferred Alternative). Sensitivity to this change in visual environment would likely be moderate to moderately high, as this segment of the Existing Alignment Alternative (Preferred Alternative) would introduce a roadway at a new location and impact the character of the mature vegetation located in the adjacent river basin. Overall viewer response would be moderate to high.

The resulting visual impact would be moderate to moderately high.

Key View 6 – Southern Alignment Alternative

The project proposes to introduce a new transportation corridor into previously undeveloped land. Proposed project features in this location include a four-lane highway, 30-foot-average-width median, moderate grading, and vegetation removal. The full alignment would be elevated above the existing surrounding grade on fill.

The proposed project would shift the roadway alignment into the San Luis Rey River Valley. This would be a dramatic change, as a new transportation corridor would be introduced through this location. Grading, fill, and vegetation removal required to construct the Southern Alignment Alternative would be visible in this area. In addition, the new segment of roadway at this location would require the removal of mature trees and native vegetation, as well as the relocation of Vessels Stallion Farm. These changes to the community's visual character and quality would be high. Figure 3.11-7b simulates the proposed improvements for Key View 6.

These changes to the views would be apparent to surrounding residents in the hillsides to the north of SR-76 and south of the river valley. Motorists traveling along current SR-76 on a daily

basis would experience short-duration foreground views of the Southern Alignment Alternative. Local residents use SR-76 to enter and exit the surrounding neighborhoods on a daily basis and would experience short-duration foreground views of the Southern Alignment Alternative. Sensitivity to this change in visual environment would likely be high, as this segment of the Southern Alignment Alternative would introduce a roadway at a new location and require the removal of mature trees and native vegetation, as well as the relocation of Vessels Stallion Farm. Overall viewer response would be high.

The resulting visual impact would be high.

Key View 7 – Existing Alignment Alternative (Preferred Alternative)

The proposed project features under the Existing Alignment Alternative (Preferred Alternative) in this location include the extension of Gird Road into the river basin at grade level to intersect with the proposed highway alignment. Design features include the closure of the existing SR-76 alignment and removal of asphalt along the eastern segment, and the restoration of native vegetation. A signalized intersection would be added at the intersection of Gird Road (extension) and the proposed SR-76 Existing Alignment Alternative (Preferred Alternative).

The change to the existing visual quality would be considerable with the introduction of a new roadway and intersection at this location. The removal of mature trees and understory vegetation would be a noticeable change to existing character, as view opportunities facing south across the valley would become possible. Roadway grading would place the road above the surrounding grade of the river basin, affording an elevated vantage point into the riparian habitat. These changes to the existing visual quality would be moderate to moderately high.

Changes to this view would affect residents living in the vicinity of Gird Road and Flowerwood Lane, and motorists traveling south along Gird Road. Motorists would experience short-duration foreground views of the extended roadway and would notice the removal of vegetation; residents would be subject to permanent views. These changes would constitute a noticeable change in the foreground conditions but would not subject most viewers to long-duration views. Sensitivity to this change in visual environment would likely be moderate to moderately high, as the Existing Alignment Alternative (Preferred Alternative) would introduce a new signalized intersection and roadway extension into riparian vegetation. Figure 3.11-8b simulates the transformation from existing conditions to proposed conditions for Key View 7.

The resulting visual impact would be moderate to moderately high.

Key View 8A – Existing Alignment Alternative (Preferred Alternative)

Proposed improvements in this location would introduce a four-lane highway, 30-foot-average-width median with concrete barrier, extensive grading, and removal of mature vegetation along the proposed alignment and in the San Luis Rey River bed.

The change to the existing visual quality would be considerable, with the introduction of a new transportation corridor at this location. The proposed project would shift the alignment to the riverbed adjacent to the private property located south of SR-76 near Star Track Way. Additionally, landform changes and vegetation removal required to construct the Existing Alignment Alternative (Preferred Alternative) would be visible in this area. These changes to the community's visual character and quality would be moderate to moderately high. Figure 3.11-9b simulates the proposed improvements for Key View 8A.

The changes to the views would be apparent to passing motorists and nearby residents. Motorists traveling along SR-76 on a daily basis would experience short-duration foreground views of the Existing Alignment Alternative (Preferred Alternative) and the frontage road that would provide access to the new alignment. However, with this shift south of the existing SR-76 corridor, the location of the Existing Alignment Alternative (Preferred Alternative) would open up the view to the west and allow viewers a less obstructed view of the distant hillsides south of the San Luis Rey River Valley. Local residents use SR-76 to enter and exit the surrounding neighborhoods on a daily basis and would experience short-duration foreground views of the Existing Alignment Alternative (Preferred Alternative). In particular, the adjacent private residence south of the Existing Alignment Alternative (Preferred Alternative) would have a high sensitivity to the change in the visual environment. Overall viewer response would be moderate to moderately high.

The resulting visual impact would be high.

Key View 8B – Southern Alignment Alternative

The proposed improvements in this location consist of a four-lane highway and 30-foot-average-width median with concrete barrier, moderate grading, and removal of mature vegetation. A bridge structure would also be introduced to cross over the San Luis Rey River. The full alignment would be elevated above the existing surrounding grade on fill.

Changes to the existing visual quality would be considerable, as a new transportation corridor would be introduced at this location. The proposed project would shift the alignment to traverse the riverbed adjacent to the private property located south of SR-76 near Star Track Way. Additionally, landform changes and vegetation removal, including mature trees and native vegetation, required to construct the Southern Alignment Alternative would be fairly visible in this area. Such changes would be apparent to passing motorists, a small number of residences in the hillsides north of SR-76, and, in particular, the private residence adjacent to the south of the proposed project. These changes to the community's visual character and quality would be high. Figure 3.11-9c simulates the proposed improvements for Key View 8B.

Changes to the views would be apparent to passing motorists and nearby residents. Motorists traveling along SR-76 on a daily basis would experience short-duration foreground views of the Southern Alignment Alternative. However, with this shift south of the existing SR-76 corridor, the location of the Southern Alignment Alternative would open up the view to the west and allow a less obstructed view to the distant hillsides south of the San Luis Rey River bed and associated valley. Local residents use SR-76 to enter and exit the surrounding neighborhoods on a daily basis and would experience short-duration foreground views of the Southern Alignment Alternative. In particular, the adjacent private residence south of the Southern Alignment Alternative would have a high sensitivity to the change in the visual environment. Viewer sensitivity to this change in visual environment would likely be high, as this segment of the Southern Alignment Alternative would introduce a roadway at a new location and open up a less obstructed view to the west.

The resulting visual impact would be high.

Key View 9 – Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The proposed improvements in this location consist of widening the current roadway to accommodate additional through and turn lanes. Grading would be required on the southern portion of SR-76 to accommodate these proposed improvements. Additionally, a proposed area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way on a currently undeveloped parcel.

The proposed improvements for the intersection and interchange would introduce greater areas of pavement and new cut slopes at this location. The interchange and intersection improvements at SR-76 and Old Highway 395 would not be a considerable change, as the existing major transportation corridor and interchange would only be slightly modified. Grading and vegetation removal would be required to construct the proposed interchange improvements in this location. Although these changes would be fairly visible in this area, the overall changes to the community's visual character and quality would be low to moderate. Figure 3.11-10b simulates the proposed improvements for Key View 9.

The changes to the views would be apparent to passing motorists, nearby business employees and patrons, and a small number of residences in the surrounding hillsides. Motorists traveling along I-15 on a daily basis would experience short-duration foreground views of the proposed interchange improvements; however, the memorable background view to the mountain range would not be altered. Nearby business employees and patrons would also experience short-duration foreground views of the proposed improvements, but their main focus would not be the roadway. Local residents use SR-76 to enter and exit the surrounding neighborhoods on a daily basis and would also experience short-duration foreground views of the proposed improvements. Sensitivity to this change in visual environment would likely be low with the proposed improvements to the intersection and interchange. Overall viewer response would be low to moderate.

The resulting visual impact would be low.

Key View 10 – Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The proposed improvements at the SR-76 and I-15 interchange would include the widening of the existing bridge over I-15, improvements to the existing on- and off-ramps, and the addition of loop on-ramps for both the northbound and southbound directions. Grading and ramp improvements would require removal of some mature vegetation in this area. The area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, is evaluated in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way. This is a common element to both alignment alternatives and may introduce a substantial amount of paving and lighting to the project area.

Changes to the existing visual quality would be minimal, as the existing major transportation corridor and interchange would only be modified. Grading and vegetation removal would be required to construct the proposed interchange improvements and would be apparent to passing motorists and a small number of surrounding residences. These changes to visual character and quality would be low. Figure 3.11-11b simulates the proposed improvements for Key View 10.

These changes to the views would be apparent to passing motorists and nearby residents. Motorists traveling along I-15 on a daily basis would experience short-duration foreground views of the proposed interchange improvements; however, the background view would not be altered. Local residents use SR-76 to enter and exit the surrounding neighborhoods on a daily basis and would also experience short-duration foreground views of the proposed improvements. For all viewers, the proposed improvements to the interchange would not permanently increase glare or visually disrupt views of the San Luis Rey River basin and associated valley. Sensitivity to this change in visual environment would likely be low with the proposed improvements to the interchange. Overall viewer response would be low.

The resulting visual impact would be low.

Summary of Impacts

Generally, the expectations are for a cohesive scenic rural experience with minimal distractions and disruptions from the presence of traffic and the scattering of existing residential development and commercial use. The primary viewers within the project area and the larger viewshed would be motorists, surrounding residences, commercial employees and patrons, and recreational users. Depending on the alignment alternative, the impacts would vary in location and magnitude.

Existing Alignment Alternative (Preferred Alternative)

The existing visual quality of the SR-76 corridor is moderate to moderately high along the existing alignment, and high within the river valley itself. This is due primarily to the abundance of native and riparian vegetation and topographic relief associated with the river and the general open rural character. In those areas where the Existing Alignment Alternative (Preferred Alternative) would follow the current SR-76 corridor, the visual impact to the immediate area would be less pronounced, as only the existing highway would be widened. However, the visual impacts for the overall project would be moderate, primarily due to the extent of landform modification to the steep hillsides along the north side of SR-76 between Old Highway 395 and Gird Road. Therefore, major grading operations and resulting landform alterations that harshly contrast with the existing visual environment would occur. In addition, the paving and construction of segments of the Existing Alignment Alternative (Preferred Alternative) into areas south of the current SR-76 corridor would introduce a new segment of the transportation corridor.

The Existing Alignment Alternative (Preferred Alternative) would not require any bridge structures and, thus, would not impact the visual integrity of the existing mature riparian vegetation along the riverbed or the open river valley. However, the Existing Alignment Alternative (Preferred Alternative) would require removal of a variety of vegetation types, including mature trees and substantial masses of plant material. Even though the Existing Alignment Alternative (Preferred Alternative) would primarily remain along the current SR-76 roadway alignment, incursions into the river basin would occur due to modifications in roadway geometry and configuration. These modifications would disturb existing mature vegetation and add a substantial amount of paved surface area. The Existing Alignment Alternative (Preferred Alternative) would result in moderate to high visual impacts.

Southern Alignment Alternative

The Southern Alignment Alternative would noticeably compromise the character and scale of the proposed project area. This alternative would introduce a new transportation corridor, coupled with new bridges, guardrails, drainage structures, and other associated construction components, into a largely undeveloped area. These impacts, combined with extensive landform modification and vegetation removal, would result in substantially reduced visual quality and character.

The Southern Alignment Alternative would introduce a new highway south of the river in addition to the current SR-76 roadway and would require major grading operations resulting in landform alterations that harshly contrast with the existing visual environment. The Southern Alignment Alternative would require new bridges spanning the river in two locations. This would have a pronounced negative impact on the visual integrity of the existing mature riparian vegetation along the riverbed and the open river valley.

The Southern Alignment Alternative would result in a large net gain in paved surfaces with the associated grading and a larger disturbance to existing vegetation. The Southern Alignment Alternative would result in moderately high to high-level visual impacts. Table 3.11-1 provides a summary of the visual changes for the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative.

Table 3.11-1. Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative Summary

Key View	Alignment Alternative	Location	Visual Quality/ Character Change	Visual Sensitivity/ Response Change	Resulting Visual Impact
1A	Existing	SR-76/South Mission Road intersection	Low to moderate	Low to moderate	Low to moderate
1B	Southern	SR-76/South Mission Road intersection	High	Moderate	Moderate
2	Existing	West of Calle de la Vuelta, east of Ramona Drive	Moderate to moderately high	Moderately high	Moderately high
3	Southern	San Luis Rey River bed	High	High	High
4	Southern	Residential neighborhood (Sycamore Ranch subdivision) on northern hillsides	Moderate	Moderate	Moderate
5	Existing	West of Gird Road	Moderate to moderately high	Moderate to high	Moderate to moderately high
6	Southern	San Luis Rey River Valley	High	High	High
7	Existing	Gird Road	Moderate to moderately high	Moderate to moderately high	Moderate to moderately high
8A	Existing	Star Track Way	Moderate to moderately high	Moderate to moderately high	High
8B	Southern	Star Track Way	High	High	High
9	Existing and Southern	SR-76/Old Highway 395 intersection	Low to moderate	Low to moderate	Low
10	Existing and Southern	SR-76/I-15 interchange	Low	Low	Low

No Build Alternative

The No Build Alternative would not change the existing character or scale of the area, as no new construction would occur. Therefore, no visual impacts would result.

3.11.4 Avoidance, Minimization, and/or Mitigation Measures

Existing scenic and visual resources would be preserved to the extent possible, which includes preservation of existing mature trees, shrubs, and groundcovers along the north side of SR-76. Since SR-76 is currently eligible for Scenic Highway Designation by the State of California, the proposed project would likely compromise the visual quality and character of the corridor. It is, therefore, important that these mitigation measures be implemented to help minimize adverse visual impacts while maintaining a positive image for the community.

Sustainable landscape treatment would be designed to help reinforce and maintain the rural and riparian character of the project area, minimize the adverse visual impacts resulting from construction, provide visual cohesion, and control erosion. Landscape design would reflect existing natural tree and shrub massing while softening and enhancing the project area. Large tree and shrub masses would be used for maximum visual effect. Straight lines associated with formal street landscape planting design would be avoided.

Replacement plantings of the same species would occur in areas where mature trees and shrubs would be removed during construction. This is particularly important where exposed graded slopes contrast sharply with the adjoining vegetated slopes. Successful revegetation of manufactured slopes is critical for restoring visual quality and character to the project area.

Disturbed areas would be planted with sustainable plant material and seed mixes that can be readily established with an extended plant establishment period and irrigation. The planting would occur as part of the roadway construction project including a one-year plant establishment period followed by an additional three-year maintenance contract. The plant palette would consist of native trees, shrubs, and ground covers that are similar in composition to the adjacent habitats and that reinforce the landscape concept and would be developed with the District Landscape Architect and Biologist. This plant palette would be consistent with native vegetation on the steep hillsides [such as California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilulars*), bush sunflower (*Encelia californica*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rhus integrifolia*)] and along the riverbed [such as California sycamore (*Platanus recemosa*), western cottonwood (*Populus fremontii*), willow species (*Salix* spp.)] for the Existing Alignment Alternative (Preferred Alternative), and would maintain the pastoral landscape of the Southern Alignment Alternative. Small spaces within developed, urbanized areas may be landscaped with noninvasive ornamental plant materials. The size of the material selected would be large enough to visually reduce the scale of the proposed widened highway improvements. Planting associated with biology mitigation and National Pollutant Discharge Elimination System erosion-control procedures may contribute to, but would not totally satisfy, visual mitigation.

Adequate mitigation relies on growth, maintenance, and time to reach a size and maturity to achieve the desired visual effect. Sufficient maintenance (four years) and irrigation would be provided as needed in the early years. It is anticipated that the permanent mitigation measures from plant material and seeding would be substantially effective within 5 years of implementation.

Revegetation via duff, hydroseeding, planting, and/or possibly termporary irrigation and replacement with in-kind/similar native species, to the extent that is feasible and practicable. Mitigation for both temporary and permanent impacts would have mitigation management and monitoring plans to further ensure that all of the habitat types of self-sustaining over the long-term. A regular weeding and maintenance schedule may be implemented.

Measures to mitigate removal of vegetation would include: removal of non-native plants such as Arundo and replant with native trees and shrubs. Plant riparian areas with willow, cottonwood and/or sycamore trees to increase shade canopy and aid in restoring riparian habitats and help reduce runoff impacts to water quality.

Extensive grading (see Figures 2.1-2a-2g, 2.1-3a-3g, 2.1-4, and 2.1-5), coupled with the associated vegetation removal, is the primary source of adverse visual impacts for the Existing Alignment Alternative (Preferred Alternative). Therefore, an important visual mitigation measure is the sensitive design of landform alteration to achieve natural-appearing slopes, to soften long or high slope banks, and to reduce visual scarring of the existing terrain.

While standard highway grading techniques are designed to meet engineering requirements, contour grading may be used to create a finished grade that blends the construction into the surrounding landscape. Contour grading would be employed to construct subtly undulating landforms while minimizing the usual straight cut and fill manufactured slopes typical of much highway construction.

Grading would result in land surfaces that reflect the naturally occurring contours prior to the alteration or that suggest natural terrain that is rounded and nonplanar. Slopes would have variable gradients and undulate to simulate a natural slope. For instance, slopes may range from 2:1 to 4:1 in some areas, while slopes steeper than 2:1 may be considered in others. Tops of cut slopes and where constructed slopes join natural grades would be rounded to make a more naturally appearing transition. Rounding would also be employed at the toe of fill slopes to help blend the slope with the existing terrain.

Potential blasting and cutting through granite and other rock would be sculpted to achieve a rough, irregular, naturally appearing surface. Smooth, uniform cutting would be avoided in favor of blasting. Planting pockets and irregular stepped slopes would be created to provide opportunities for successful natural-appearing revegetation. Any existing rock outcroppings would remain in place when possible. Slope molding and rock cut sculpting would be integral to the clearing and grading construction operations. Large rocks would be left in place and graded around with varying slopes. Rock surfaces exposed after blasting or cutting would be coated with a desert varnish (rock staining) to create an aged effect.

Measures to Address Impacts from Specific Roadway Elements

Park and Ride Facility

The Park and Ride facility is a common element to both alignment alternatives. It may introduce a substantial amount of paving and lighting to the project area. To mitigate the potentially negative visual impacts associated with this facility, a combination of measures would be considered. An irrigated landscape buffer, consisting of native trees and vegetation, would be planted along the eastern and northern boundaries of the Park and Ride facility to help screen it from the surrounding residences and motorists traveling on I-15. Additionally, streetscape planting and landscaped medians, including trees and plant material, would be included in the

parking areas. Lighting in the Park and Ride facility would be consistent with the lighting along the proposed alternatives. The Park and Ride would be located adjacent to an existing interchange that uses standard interchange lighting, including lighting on large poles. The lighting would be appropriate for the rural nature of the area and would include such elements as glare shields or amber bulbs.

Exposed Rock/Rock Slope Protection

RSP in the form of stone riprap would be used on exposed fill slopes along the edges of the transportation corridor to protect the SR-76 from river encroachment. The RSP would be installed and covered in dirt to facilitate hydroseed establishment or planting between the rocks. The slopes would be revegetated with native plant material in accordance with the landscape concept plan and be consistent with the surrounding plant palette. Areas of RSP that are exposed, specifically in areas of drainage outfalls, and cannot be covered and planted may be coated with a desert varnish (rock stain) to create an aged effect. After blasting or cutting, exposed rock surfaces would be coated with the same desert varnish (rock stain).

Walls

Walls may occur in either alignment alternative and would be consistent with the rural character of the project area. Walls would be earth tones, with consideration given to screening the walls with vines or planting.

Bridges

Bridges traditionally introduce inorganic forms and vertical planes into the landscape, and attention to finish is critical in reducing the overall scale and visual intrusion of these structures. Design features would include earth-toned integral color concrete, natural stone veneer, or a form-liner pattern (e.g., Antietam Dry-Stack pattern). Additionally, large vertical planes would be broken up by variations in texture (e.g., decorative banding), when appropriate.

Fences

Fencing would be treated as a decorative element within the landscape whenever feasible. Split rail or comparable style would be considered in this area to reinforce the rural experience. In instances requiring chain-link fencing, the fencing would be galvanized with a finish/color that maintains the rural character of the project area.

Pavement

In some areas where the proposed project results in excess pavement, the pavement would be abandoned and removed, and those areas revegetated. This is particularly the case under the Existing Alignment Alternative (Preferred Alternative) where portions of the current highway would no longer be needed due to curve corrections.

Barriers and Guardrails

Median barriers would be earth tones (tan buff/latte). The introduction of decorative surface treatment has the potential to attract undue attention to this roadway element.

Guardrails are subject to engineering feasibility and traffic safety, but efforts would be made to incorporate guardrail materials that maintain the rural character of the project area. Earth-toned materials would be considered, as they further reinforce the existing rural experience.

Lighting

While Caltrans would strive to be consistent with the County of San Diego night-time lighting requirements, the poles and fixtures would be selected based on their contribution to the overall landscape character of the project area. Because lighting is used at signalized intersections only, this roadway element can be used as a gateway feature, and to serve as a subtle alert to motorists of an approaching change in character or roadway configuration. When selecting lighting fixtures, particular attention would be paid to the scale, texture, color, and ability to satisfy the lighting requirements. The lighting would be appropriate for the rural nature of the area and would include such elements as glare shields or amber bulbs to minimize impacts to sensitive habitat and minimize glare.

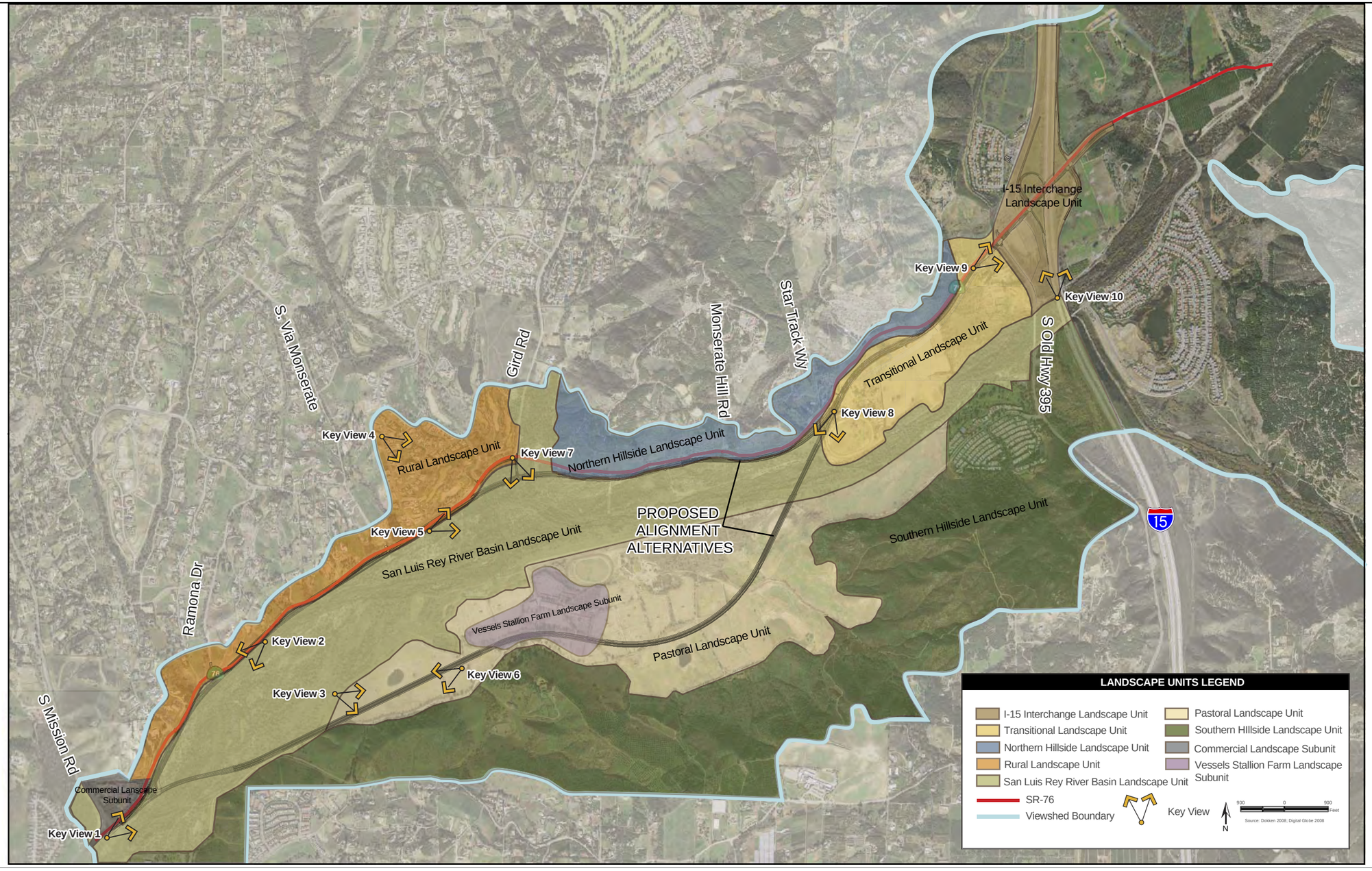

Figure 3.11-1
Viewshed Landscape Units and Key Views Map

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Key View 1 represents the view to the east along SR-76 at the intersection of SR-76 and South Mission Road from the west.

Figure 3.11-2a

Existing Key View 1 - Existing (Preferred) and Southern Alignment Alternatives

Key View 1A represents the view to the east of the intersection of SR-76 and South Mission Road from the west. At Key View 1A, the proposed project would widen the existing alignment to accommodate additional through and turn lanes, include significant fill and grading, and remove mature riparian vegetation in the river basin.

Figure 3.11-2b

Visual Simulation of Key View 1A - Existing Alignment Alternative (Preferred)

Key View 1B represents the view to the east of the intersection of SR-76 and South Mission Road from the west. At Key View 1B, the proposed project would widen the existing alignment to accommodate additional through and turn lanes, include significant fill and grading, and remove mature riparian vegetation in the river basin.

Figure 3.11-2c

Visual Simulation of Key View 1B - Southern Alignment Alternative

Key View 2, represents the view experienced by motorists traveling west on SR-76 as they approach Ramona Drive from the east.

Figure 3.11-3a
Existing Key View 2 - Existing Alignment Alternative (Preferred)

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Key View 2 represents the view experienced by motorists traveling west on existing SR-76 as they approach Ramona Drive from the west. At Key View 2, the proposed project would include a four-lane highway, 30-foot-wide median, and extensive landform alterations.

Figure 3.11-3b
Visual Simulation of Key View 2 - Existing Alignment Alternative (Preferred)

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Key View 3 represents the view experienced by recreational users located in the San Luis Rey River basin.

Figure 3.11-4a
Existing Key View 3 - Southern Alignment Alternative

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Key View 3 represents the view experienced by recreational users located in the San Luis Rey River basin. At Key View 3, the proposed project would include a four-lane highway, 30-foot-wide median, significant grading, and removal of some mature trees. The full alignment would be elevated at the intersection of Dulin Ranch Road as the roadway would become grade separated to allow a north-south undercrossing.

Figure 3.11-4b

Visual Simulation of Key View 3 - Southern Alignment Alternative

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Key View 4 represents the view of Vessels Stallion Farm to the south across the San Luis Rey River valley from the residential neighborhood located on Via Monserate Road.

Figure 3.11-5a
Existing Key View 4 - Southern Alignment Alternative

Key View 4 represents the view of Vessels Stallion Farm to the south from the residential neighborhood located on Via Monserate Road. At Key View 4, the proposed project would include a four-lane, elevated highway with a 30-foot-wide median and a grade separated intersection at Dulin Ranch Road.

Figure 3.11-5b

Visual Simulation of Key View 4 - Southern Alignment Alternative

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Key View 5 represents the view approaching the deviation of the existing SR-76 alignment at Gird Road, from the west.

Figure 3.11-6a
Existing Key View 5 - Existing Alignment Alternative (Preferred)

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Key View 5 represents the view approaching the deviation of the existing alignment at Gird Road, from the west. At Key View 5, the proposed project would include a four-lane highway with a 30-foot-wide median, extensive grading and fill in the San Luis Rey River basin and adjacent slopes, and substantial vegetation removal. Rock slope protection would line the elevated roadway in the areas of exposed fill slopes and utility poles would be realigned.

Figure 3.11-6b

Visual Simulation of Key View 5 - Existing Alignment Alternative (Preferred)

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Key View 6 represents the view facing west across the valley from the Vessels Stallion Farm property.

Figure 3.11-7a
Existing Key View 6 - Southern Alignment Alternative

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Key View 6 represents the view of the valley from the Vessels Stallion farm looking west. At Key View 6, the proposed project would include a four-lane highway with a 30-foot-wide median, significant grading, and removal of some mature trees. The full alignment would be elevated at the intersection of Dulin Ranch Road as the roadway becomes grade separated to allow a north-south undercrossing. Although not readily visible in this key view, a new bridge would cross the San Luis Rey River to the east of this location.

Figure 3.11-7b
Visual Simulation of Key View 6 - Southern Alignment Alternative

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Key View 7 represents the view to the south of Gird Road toward the San Luis Rey River.

Figure 3.11-8a
Existing Key View 7 - Existing Alignment Alternative (Preferred)

Key View 7 represents the conditions looking south from Gird Road towards the San Luis Rey River. At Key View 7, the proposed project would include the extension of Gird Road into the river basin to intersect with the proposed highway alignment. Installation of retaining walls along the highways alignment, the closure and removal of asphalt along the eastern segment of the existing SR-76 alignment, and the restoration of native vegetation would occur. A signalized intersection would be added at the intersection of Gird Road and the proposed Existing Alignment Alternative.

Figure 3.11-8b

Visual Simulation of Key View 7 - Existing Alignment Alternative (Preferred)

Key View 8 represents the view to the west across private property located south of SR-76 near Star Track Way.

Figure 3.11-9a

Existing Key View 8 - Existing (Preferred) and Southern Alignment Alternatives

Key View 8A represents the view looking west near Star Track Way. At Key View 8A, the porposed project would include a four-lane highway with 30-foot-wide median, extensive grading, and removal of mature trees along the proposed alignment. Additional project features include increased pavement with turn pockets and a break in the median.

Figure 3.11-9b

Visual Simulation of Key View 8A - Existing Alignment Alternative (Preferred)

P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\6Graphics\Figures\VIAfig 13Key View 3b_Proposed_G.ai, 11/17/08, AveryG

Key View 8B represents the view looking west near Star Track Way. At Key View 8B, the proposed project would include a four-lane highway with 30-foot-wide median, moderate grading, and removal of existing mature trees. Although not readily visible in this key view, a new bridge would span the San Luis Rey River basin and mature riparian vegetation would be removed. Additional project features introduce increased areas of pavement with turn pockets and a break in the median.

Figure 3.11-9c

Visual Simulation of Key View 8B - Southern Alignment Alternative

Key View 9 represents the view of the SR-76/Old Hwy 395 intersection from the west.

Figure 3.11-10a

Existing Key View 9 - Existing (Preferred) and Southern Alignment Alternatives

Key View 9 represents the view of the SR-76/Old Hwy 395 intersection from the west. At Key View 9, the proposed project would include the widening of the current roadway to accommodate additional through and turn lanes. Grading would be required on the southern portion of existing SR-76 to accommodate the widened roadway. Although not readily visible in this key view, a Park and Ride facility would be constructed south of SR-76 and east of Old Hwy 395 on a currently undeveloped parcel.

Figure 3.11-10b

Visual Simulation of Key View 9 - Existing (Preferred) and Southern Alignment Alternatives

Key View 10 represents the view to the north on I-15 toward the SR-76 and I-15 interchange.

Figure 3.11-11a
Existing Key View 10 - Existing (Preferred) and Southern Alignment Alternatives

Key View 10 represents the view while traveling north on I-15 toward the SR-76 and I-15 interchange. At Key View 10, the project proposes modifications to the SR-76 and I-15 interchange which include replacing the existing bridge over I-15, widening the existing on-and off-ramps, and adding loop on-ramps for both the northbound and southbound directions. Grading and ramp improvements would require removal of some mature vegetation in this area. Although not readily visible in this key view, a Park and Ride facility would be located to the west of the interchange between Old Highway 395 and I-15.

Figure 3.11-11b

Visual Simulation of Key View 10 - Existing (Preferred) and Southern Alignment Alternatives

3.12 CULTURAL RESOURCES

3.12.1 Regulatory Setting

"Cultural resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include the following.

The National Historic Preservation Act of 1966, as amended (NHPA) 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 the 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 (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. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 327) (July 1, 2007).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land associated with historic properties. See Appendix B and Appendix L for specific information regarding Section 4(f).

Historical resources are considered under CEQA, as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet NRHP listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its right-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks.

3.12.2 Affected Environment

Reports prepared for the proposed project include the following:

- Historic Property Survey Report (HPSR) (January 2010)
- HPSR First Supplemental (June 2010)
- HPSR Second Supplemental (June 2011)
- Archaeological Survey Report (ASR) (June 2009)
- ASR First Addendum (June 2011)
- Extended Phase 1 Report (XP1) (June 2009)
- Historical Resources Evaluation Report (HRER) (June 2009)
- Geomorphology/Geophysical Evaluation Report (GER) (November 2009)
- Native American Consultation Report (August 2009)

These reports contain sensitive confidential information regarding site locations and are not for public review. The results and conclusions are incorporated into the HPSR.

The area of potential effects (APE) for the project was established in consultation with a Caltrans Professionally Qualified Staff (PQS) Archaeologist and the Project Manager, and was signed on December 10, 2009; the First Supplemental APE was signed on June 1, 2010. The archaeological and architectural APE was delineated as a combination of the existing SR-76 right-of-way, temporary impacts (i.e., construction easements), and proposed right-of-way. The Second Supplemental APE, which addresses the Vessels Ranch Biological Mitigation Site, was signed on April 19, 2011.

A 500-foot buffer around the two proposed alignments was used to establish the study areas. Efforts to identify cultural resources within the study area included records searches (consisting of archaeological and historical records and literature reviews); field surveys; consultation with Native American groups; historical site inventories; and review of historical maps, aerials, and photographs. The ASR and HRER serve as inventory documents, identifying those cultural resources located within the study areas for each alternative. The XP1 Archaeological Text Excavation Report presents the findings of limited archaeological testing done at one prehistoric site, CA-SDI-5590. The Geomorphology/Geophysical Evaluation Report is used to determine the likelihood of buried cultural resources being present within the project footprint. Lastly, the Native American Consultation report documents continuous and ongoing consultations with local Native American tribes regarding cultural resources within the project area.

While numerous cultural resources were identified within the study areas, ultimately, two prehistoric archaeological sites and one bridge were determined to be within the APE. A portion of one prehistoric archaeological site was identified within the APE established for the Vessels Ranch Biological Mitigation Site.

Existing Alignment Alternative (Preferred Alternative)

Cultural resources located within the Existing Alignment Alternative (Preferred Alternative) APE include two prehistoric archaeological sites (CA-SDI-681/5589 and CA-SDI-5590) and one bridge. One prehistoric archaeological site (CA-SDI-776 Locus A) is partially situated within the APE for the Vessels Ranch Biological Mitigation Site.

Prehistoric Sites

CA-SDI-681 and CA-SDI-5589 were combined into a single resource based on previous studies and the pedestrian survey. This site is located on the north side of SR-76 on a terrace above the roadway. Site CA-SDI-681 was originally recorded by D.L. True in 1960 as a camp area dating to the Pauma complex. The site was relocated in 1984 and 1985 and was updated in 1991 when ceramics and Piedra de Lumbre chert were observed. It was also noted that this site may be related to the Late Prehistoric period site CA-SDI-5589 located to the east of CA-SDI-681. CA-SDI-5589 was originally recorded in 1978 as an extensive village with at least six loci. The site form noted pictographs, lithics, tools, projectile points, groundstone artifacts, ceramics, a hearth, milling features, and a cremation. The site was dated to the San Luis Rey II period, which is typically identified with the advent of pottery and is dated to the Late Prehistoric period. The San Diego County Archaeological Society conducted post-hole tests at five of the six locations and excavated units at two of the loci; however, the record stated that the eastern boundary of the complex had not been clearly defined. In 1984, Caltrans conducted XP1 testing at CA-SDI-5589; based on those findings, the site was found eligible for inclusion in the NRHP.

On May 8, 1984 Caltrans received a Determination of Eligibility Notification from the Keeper of the National Register. Caltrans conducted limited testing at CA-SDI-681 in 1992. The three units produced large quantities of artifacts and the units reached a depth of 100 centimeters before encountering bedrock. Based on these results, it was determined that CA-SDI-681 and CA-SDI-5589 represented one site. Due to the presence and density of artifacts and midden located between the two sites, the site boundaries were updated in 2008 to reflect the larger complex. This site is important to the Native American community.

CA-SDI-5590 is located on a hillside slope on the north side of SR-76. The site was revisited in 2008 and the site record was updated to reflect six milling features, associated flakes, and ceramics. All milling features are located north of SR-76. The lithics and ceramics were noted farther down the slope. XP1 testing was conducted in 2009 to determine if the site extended into the Caltrans' right-of-way. Fourteen shovel test pits and two units were excavated as part of this effort. Five of the shovel test pits and both units produced sparse cultural materials in a disturbed context. The testing program concluded that there were no intact subsurface deposits located within the APE and that the subsurface artifacts were the result of slope wash. The northern portion of the site was not addressed, as it is outside of the APE. This site is "considered eligible" and therefore is being treated as eligible for purposes of this project, in accordance with Stipulation VIII.C.3 of the PA. The SHPO was notified of this finding and on March 29, 2010, an e-mail was received stating, "No objections to the finding."

CA-SDI-776, a prehistoric habitation site, was originally recorded by D. L. True in 1960, and has been updated multiple times by various archaeologists. The site is located south of SR-76 and south of the San Luis Rey River. The northern portion of Locus A is situated within the APE of the Vessels Ranch Biological Mitigation Site. The southern portion of Locus A was not addressed, as it is outside the APE. This site is "considered eligible" and therefore is being treated as eligible for purposes of this project, in accordance with Stipulation VIII.C.3 of the PA. The SHPO was notified of this finding and on July 27, 2011, an e-mail was received stating, "No objections to your official finding."

Bridges

The following bridge is listed as Category 5 (not eligible for listing in the NRHP) in the Caltrans Historic Bridge Inventory: Live Oak Creek bridge (57-0070).

Southern Alignment Alternative

There are no cultural resources within the Southern Alignment Alternative APE.

3.12.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

With respect to CA-SDI-681/CA-SDI-5589 and CA-SDI-5590, the Existing Alignment Alternative (Preferred Alternative) would result in a finding of No Adverse Effect with Standard Conditions, which would include the establishment of environmentally sensitive areas (ESAs) pursuant to Section 106 PA Stipulation VIII.C.3 and X.B.2.a(ii). This does not mean the sites would be affected; they would not. Rather, processing the sites under the No Adverse Effect with Standard Conditions scenario allows Caltrans to avoid the sites and protect them from any project-related activities. The four conditions required to process the sites in this manner have all been met: the boundaries of the sites and the essential features are accurately delineated;

the scope and design of the undertaking are well developed and the project's management and engineers have confirmed that the sites can and would be avoided by all construction activities; all appropriate protection measures are defined; and ESA action plans have been developed (see Attachment 5 of the Section 106 PA). Therefore, pursuant to the PA, consultation took place with the Native American community to determine whether the establishment of ESAs would adequately protect these sites without the need for other conditions or mitigations; these groups agreed that the establishment of ESAs would adequately protect these sites. SHPO was notified of this finding and on March 29, 2010, an e-mail was received stating, "No objections to the findings."

With respect to CA-SDI-776 Locus A, the Vessels Ranch Biological Mitigation Site would also result in a finding of No Adverse Effect with Standard Conditions with the establishment of an ESA. During subsequent Native American consultation, the establishment of an ESA was determined to be adequate.

SHPO was notified of this finding and on July 27, 2011, an e-mail was received stating, "No objections to your official finding."

Southern Alignment Alternative

The Southern Alignment Alternative would not impact any cultural resources.

No Build Alternative

The No Build Alternative would not impact any cultural resources.

3.12.4 Avoidance, Minimization, and/or Mitigation Measures

Caltrans would depict CA-SDI-681/CA-SDI-5589, CA-SDI-5590, and CA-SDI-776 Locus A as ESAs on all project plans and would restrict entrance into and disturbance of these sites by adhering to an ESA action plan. Each of the sites would be avoided by all construction activity. Caltrans' geomorphological assessment of the project footprint was designed to determine the potential for buried cultural resources. Certain areas were identified as having a "high sensitivity" for potential buried deposits. Caltrans would monitor these locations during construction to prevent the accidental destruction of buried cultural deposits.

The ESA action plan calls for both a "qualified" archaeological monitor and a Native American monitor to be present when ground-disturbing activities occur adjacent to those sites designated as ESAs. The ESA action plan would be modified, per Caltrans policy, to include monitoring in those areas designated as Archaeological Monitoring Areas (AMAs). AMAs are those areas adjacent to all previously recorded archaeological or cultural sites that, during construction and construction-related activities, there is a high probability of finding buried deposits based on the geomorphology of the area. These monitoring areas would be depicted on the design/construction plans, and the archaeologist and Native American monitors would be present at the preconstruction meeting.

Prior to construction, a monitoring plan, ESA action plan/AMA plan, and Post-Review Discovery Plan or combination of these plans would be developed. These plans would outline when and how monitoring would occur, and outline notification, discovery, and treatment of cultural resources procedures, including coordination, timeframes, scheduling, compensation,

responsibilities, and treatment of new discoveries. Any newly discovered cultural resource deposits would be subject to an assessment, and procedures in 36 CFR 800 would be followed.

The archaeologist and Native American monitors would work with the Caltrans environmental/construction liaison to accurately delineate and fence, if appropriate, the boundaries of those sites requiring the establishment of ESAs. These sites would be avoided by all construction activities.

If significant or potentially significant cultural resources are exposed during construction activities, work in the area would be diverted so that the archaeologist and Native American monitors can assess the nature and significance of the find. If it is not practical to modify the project to avoid destroying or damaging the site, Caltrans would consider other nonavoidance measures such as archaeological data recovery.

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 would notify the Native American Heritage Commission who would then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains would contact the District 11 Cultural Branch Chief 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.

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PHYSICAL ENVIRONMENT

3.13 HYDROLOGY AND FLOODPLAIN

This section describes the regulations and policies affecting local hydrology and the San Luis Rey River floodplain, identifies impacts that may result from the proposed project, discusses avoidance and minimization efforts, and recommends mitigation measures to reduce potential impacts where appropriate. The floodplains analysis addresses the potential impacts of the proposed project alternatives on floodplains as designated by the Federal Emergency Management Agency (FEMA). Impacts associated with water quality and localized storm water are addressed in Section 3.14, Water Quality and Storm Water Runoff.

3.13.1 Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A.

To comply, 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, and
- 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.”

Additional regulations governing actions within a floodplain include the National Flood Insurance Program (NFIP), including those regulations contained within 44 CFR, as well as the San Diego County Code of Regulatory Ordinances, Flood Damage Prevention Ordinance.

3.13.2 Affected Environment

A Floodplain Encroachment Report and Final Scour and Location Hydraulic Study were completed in June 2008, and revised in September 2009 and March 2010.

The base 100-year floodplain boundary is shown on the FEMA Flood Insurance Rate Map (FIRM) on panels 486, 487, 479, 483, and 484, effective date June 19, 1997. The FIRM panels show the flood zone designations within the proposed project vicinity to be Zones A and X. Zone A is a 100-year floodplain where the base flood elevations (BFE) have not been determined. Zone X denotes the 500-year floodplain and areas of 100-year flood with average flood depths of less than 1 foot. The 100-year peak discharges used for the study described herein were obtained from a FEMA Flood Insurance Study of San Diego County, in Volume 1 of 7, which

was revised July 2, 2002. The floodplain in relation to the project is depicted in Figures 3.13-1a and 3.13-1b.

The proposed project is located in an unincorporated area of northern San Diego County within the communities of Bonsall and Fallbrook. Bonsall and Fallbrook are bounded by unincorporated San Diego County to the north and east, the City of San Marcos to the south, the City of Vista to the southwest, and Camp Pendleton to the west. The proposed project may affect a 5.1-mile-long stretch of the San Luis Rey River, reaching from approximately 1,400 feet upstream of the Camino Del Rey Bridge to approximately 2,900 feet upstream of the I-15 San Luis Rey River Bridge.

The San Luis Rey River watershed is bordered to the north by the Santa Margarita River watershed and to the south by the Carlsbad and San Dieguito River watersheds. Major water bodies within the San Luis Rey River watershed include the San Luis Rey River itself and Lake Henshaw, which is located around 19 miles east of I-15. The existing watershed of the San Luis Rey River is the largest drainage basin in the San Diego region and is composed of 558 square miles. The watershed is bounded by the Monserate Mountains to the north, Cleveland National Forest and Camp Pendleton to the northwest, and the cities of Escondido and San Diego to the south. The basin is approximately 55 miles long and 16 miles wide.

The San Luis Rey River flows east to west in a well-defined meandering riverbed for more than 50 miles from Palomar Mountain in the Cleveland National Forest to the northwestern portion of San Diego County. The river discharges into the Pacific Ocean near Oceanside Harbor in the City of Oceanside. Approximately 10 miles downstream of Henshaw Dam water from the river is diverted to serve the municipal drinking water needs of customers in Escondido and Vista.

Two constrictions in the river channel occur within the vicinity of the proposed project as the San Luis Rey River's flow passes under the I-15 and Old Highway 395. During the 100-year storm event, the existing top width of channel flow would range from 500 to 3,200 feet, and the existing channel bottom elevations would range from 156 to 244 feet.

The San Luis Rey River supports vegetation ranging from light brush with a few sporadic trees to heavy stands of timber with dense brush where floodwaters would reach the branches. Changes in the vegetation shown by historic aerial photography suggest that higher flows wash out the vegetation.

The existing floodplain was analyzed using HEC-RAS and aerial topography. The FEMA FIRM-delineated 100-year floodplain is classified as Zone A and X. FEMA Zone A floodplains are determined by approximate means with no channel cross sections available, and no detailed hydraulic analysis to back up the extent of flooding. Zone X denotes the 500-year floodplain and areas of 100-year flood with average flood depths of less than 1 foot. For the purposes of this study, an existing 100-year floodplain boundary was developed based on recent topography, existing vegetation densities, and current site conditions. This new boundary was used as the base flood to determine the extent of floodplain encroachments that would occur as a result of the proposed improvements.

3.13.3 Environmental Consequences

Eight floodplain encroachments (E1 through E8) have been identified for the two project alternative alignments under consideration (Figures 3.13-2a and 3.13-2b). Five of the encroachments would be associated with the Existing Alignment Alternative (Preferred

Alternative) (E1 through E5), and four encroachments with the Southern Alignment Alternative (E1 and E6 through E8). One encroachment would be associated with both alternatives (E1). All floodplain encroachments would be longitudinal except for E6 and E8, which would be transverse (crosswise) encroachments at proposed bridges associated with the Southern Alignment Alternative. The total floodplain encroachment for the Existing Alignment Alternative (Preferred Alternative) would be 55.9 acres. The total floodplain encroachment for the Southern Alignment Alternative would be 79.2 acres. The Existing Alignment Alternative (Preferred Alternative) would have an impact to the water surface elevation (WSE) of the 100-year floodplain, equal to a maximum increase of 3.0 inch. The Existing Alignment Alternative (Preferred Alternative) would not result in a substantial floodplain encroachment. The Southern Alignment Alternative would have an impact to the 100-year floodplain, equal to a maximum increase to the WSE of approximately 6.7 inches. This increase in the WSE for the Southern Alignment Alternative would not result in a substantial floodplain encroachment.

Encroachments Associated with the Existing Alignment Alternative (Preferred Alternative)

Encroachment 1 (E1)

This longitudinal floodplain encroachment is located south of SR-76 and east of its intersection with South Mission Road (Figure 3.13-2a). This encroachment is 16.4 acres and is due to direct roadway/side slope encroachment and RSP that must be placed to protect against fill slope erosion.

Encroachment 2 (E2)

This longitudinal encroachment is located west of Via Monserate (Figure 3.13-2a). This encroachment is 2.86 acres and is due to direct roadway/side slope encroachment and RSP that must be placed in this location to protect against fill slope erosion.

Encroachment 3 (E3)

This longitudinal encroachment is located east of Via Monserate (Figure 3.13-2a). This encroachment is 2.28 acres and is a result of direct roadway/side slope encroachment and RSP that must be placed in this location to protect against fill slope erosion.

Encroachment 4 (E4)

This longitudinal encroachment is located south of SR-76 at its intersection with Flowerwood Lane (Figure 3.13-2a). This encroachment is 1.20 acres and is due to the direct roadway/side slope encroachment and RSP that must be placed in this location to protect against fill slope erosion.

Encroachment 5 (E5)

This longitudinal encroachment begins west of Gird Road and ends east of Star Track Way (Figures 3.13-2a and 2b). This encroachment is 33.2 acres and is due to direct roadway/side slope encroachment and RSP that must be placed in this location to protect against fill slope erosion.

Encroachments Associated with the Southern Alignment Alternative

Encroachment 1 (E1)

This longitudinal floodplain encroachment is located south of SR-76 and east of its intersection with South Mission Road (Figure 3.13-2a). This encroachment is 16.4 acres and is due to direct roadway/side slope encroachment and RSP that must be placed to protect against fill slope erosion.

Encroachment 6 (E6)

This substantial transverse encroachment spans the San Luis Rey River east of South Mission Road and extends 1.4 miles upstream along the south bank of the river along this alternative (Figure 3.13-2a). This encroachment is 32.7 acres and is due to the bridge crossing, the direct roadway/side slope encroachment, and RSP that must be placed in this location to protect the fill slopes and bridge abutments from erosion.

Encroachment 7 (E7)

This longitudinal encroachment is located through the southern portion of Vessels Stallion Farm along this alternative (Figure 3.13-2a). This encroachment is 17.21 acres and is associated with the construction of the roadway, side slopes, RSP, and on-site and off-site drainage facilities.

Encroachment 8 (E8)

This transverse encroachment spans the San Luis Rey River beginning west of Monserate Hill Road and ending east of Star Track Way (Figure 3.13-2b). This encroachment is 29.3 acres and is associated with the bridge crossing, the direct roadway side slope encroachment, and RSP that must be placed in this location to protect the fill slopes and bridge abutments from erosion.

No Build Alternative

The existing SR-76 roadway currently encroaches into the 100-year floodplain in two locations between South Mission Road and I-15. The first encroachment is 1.11 acres and is located at the intersection of SR-76 and South Mission Road. The second encroachment is 0.06 acre and is located between Gird Road and Monserate Hill Road along the existing alignment of the SR-76 roadway.

Practicability of Alternatives to Any Longitude Encroachment

The increase in the 100-year floodplain WSE as a result of the proposed improvements for each build alternative was determined by comparing the results of a Pre-Project (Existing) Condition HEC-RAS Model with a Post-Project (Proposed) Condition HEC-RAS Model.

Existing Alignment Alternative (Preferred Alternative)

The model of the Existing Alignment Alternative (Preferred Alternative) ultimately determined that there would be a maximum increase of 3.0 inch in the WSE due to the proposed encroachments. According to FEMA, any increase in the BFE of less than 1 foot is considered “low risk.” This minor increase to the BFE would not cause a substantial increase to the existing

conditions or present a risk to life or property, and no additional roadways would flood upstream from the proposed Existing Alignment Alternative (Preferred Alternative). No transportation routes would be interrupted or terminated beyond existing conditions. Impacts to the natural floodplain values generated by the Existing Alignment Alternative (Preferred Alternative) would be mitigated in accordance with the accompanying sections of this chapter. The Existing Alignment Alternative (Preferred Alternative) would not result in a substantial encroachment on the floodplain or have any substantial surface water elevation risks associated with its implementation.

Southern Alignment Alternative

The Southern Alignment Alternative proposes transverse encroachments to cross the floodplain through the construction of two bridges, in addition to the one longitudinal encroachment. The proposed San Luis Rey River Bridge – West presents constrictions into the river that would increase the WSE by 6.7 inches upstream of the bridge. The proposed San Luis Rey River Bridge – East presents constrictions into the river that would increase the WSE by 6.1 inches upstream of the bridge. The projected maximum rise in the WSE would return to the existing 100-year floodplain level within 2,500 feet upstream of the Western San Luis Rey Bridge and within 1,500 feet upstream of the San Luis Rey River Bridge – East.

The model of the Southern Alignment Alternative showed a maximum increase of 6.7 inches in the San Luis Rey River WSE due to the constrictions resulting from the two proposed bridge crossings. According to FEMA, any increase in the BFE of less than 1 foot is considered “low risk.” No additional roadways would flood upstream from the proposed Southern Alignment Alternative, and no transportation routes would be interrupted or terminated beyond existing conditions. Impacts to the natural floodplain values generated by the Southern Alignment Alternative would be mitigated as discussed in Section 3.13.4. The Southern Alignment Alternative would not result in a substantial encroachment on the floodplain and would not have surface elevation risks associated with its implementation.

Risks of the Action

Both alternatives encroach upon the 100-year floodplain at different levels of impacts based on their proposed fill. They would also both require mitigation for biologically sensitive and wetland/riparian land proposed for right-of-way requirements.

Existing Alignment Alternative (Preferred Alternative)

The model of the Existing Alignment Alternative (Preferred Alternative) ultimately determined that there would be a maximum increase of 3.0 inch in the WSE due to the proposed encroachments. According to FEMA, any increase in the BFE of less than 1 foot is considered “low risk.” This minor increase to the floodplain would not cause an increase to the existing risk to life or property, and no additional roadways would flood upstream from the proposed Existing Alignment Alternative (Preferred Alternative). No transportation routes would be interrupted or terminated beyond existing conditions. Therefore, the Existing Alignment Alternative (Preferred Alternative) would not result in a substantial encroachment on the floodplain or have surface water elevation risks associated with its implementation.

Southern Alignment Alternative

The model of the Southern Alignment Alternative showed a maximum increase of 6.7 inches in the San Luis Rey River WSE due to the constrictions resulting from the two proposed bridge crossings. According to FEMA, any increase in the BFE of less than 1 foot, is considered “low risk.” No additional roadways would flood upstream from the proposed Southern Alignment Alternative, and no transportation routes would be interrupted or terminated beyond existing conditions.

Impacts on Natural and Beneficial Floodplain Values

Natural and beneficial floodplain values, while not specifically defined in Executive Order 11988, include resources such as fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, groundwater discharge, etc., that can be found within a designated floodplain. Impacts to plants, fish, and wildlife are described in Sections 3.22, 3.23, and 3.24.

Existing Alignment Alternative (Preferred Alternative)

The five encroachments associated with the Existing Alignment Alternative (Preferred Alternative) have potential impacts to the following natural and beneficial floodplain values:

- Water quality
- Plants and animals
- Wildlife habitat
- Wetlands
- Agriculture

Southern Alignment Alternative

The four encroachments associated with the Southern Alignment Alternative have potential impacts to the following natural and beneficial floodplain values:

- Water quality
- Plants and animals
- Wildlife habitat
- Wetlands
- Agriculture
- Aesthetics

No Build Alternative

The two existing floodplain encroachments associated with the No Build Alternative are existing conditions that impact natural and beneficial floodplain values.

Support of Incompatible Floodplain Development

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would not support incompatible floodplain development. Since the 100-year flood would still be contained within the existing floodplain boundaries, there would be no increased risk to life or property associated with the proposed improvements. No additional roadways would flood upstream from the proposed I-15 bridges. Therefore, no transportation routes would be interrupted or terminated beyond existing conditions.

No new access and no direct access to the affected floodplains would be provided by the proposed alternatives. Access to the facility would be controlled, and the highway would be built above the base floodplain elevation.

Southern Alignment Alternative

The Southern Alignment Alternative would not incorporate incompatible floodplain development. The proposed bridge abutments are designed to reduce the constriction of the flow of the San Luis Rey River through the bridge openings. There would be a slight increase to the existing boundaries of the 100-year flood; however, no increases of risk to life or property associated with the proposed improvements would be anticipated. No additional roadways would flood upstream from the proposed I-15 bridges. No transportation routes would be interrupted or terminated beyond existing conditions. No new access and no direct access to the affected floodplains would be provided by the proposed alternatives. Access to the facility would be controlled, and the highway would cross the river on structures above the base floodplain elevation.

3.13.4 Avoidance, Minimization, and/or Mitigation Measures

The Existing Alignment Alternative (Preferred Alternative) would require that cross culverts be used under the highway to convey flow from the creeks north of the project to the San Luis Rey River. The culverts would be designed without headwaters rising above an elevation that would cause undesirable backwater depths or outlet velocities. The cross culverts would be used along the roadway to facilitate drainage and wildlife movement. The 40 proposed cross culverts would be constructed using pipe materials per recommendations from Caltrans District 11 Materials Lab. These features would vary in width from approximately 2.0 to 32.0 feet, and would range in height from 2.0 to 4.0 feet.

Avoidance and Minimization Efforts for the Encroachments Associated with the Existing Alignment Alternative (Preferred Alternative)

Encroachment 1

This encroachment encompasses the tie-in point with the intersection of South Mission Road. Avoidance of this encroachment is not possible. The existing SR-76/South Mission Road intersection is within the boundaries of the existing floodplain, and the required connection to South Mission Road places both proposed alignment alternatives within the floodplain. In an effort to minimize the encroachment, the slope designs were reduced from 4:1 (horizontal to vertical) to 2:1, which minimized the footprint in the floodplain. Reducing the slopes from 4:1 to

2:1 was incorporated throughout both alternative designs to minimize floodplain impacts wherever possible.

In an effort to minimize this encroachment, the alignment was adjusted to the north, out of the floodplain as much as practicable. Moving this alternative farther north and completely out of the floodplain at this location would adversely impact the community by requiring the total acquisition of four buildings in the strip mall east of South Mission Road and north of SR-76.

Encroachment 2

Avoidance of the encroachment in this area would require the alignment to be moved north, which would adversely impact the community by potentially displacing four single-family residences. This would likely result in community opposition to the project.

Encroachment 3

The original purpose for this encroachment was to allow for substantial grading cuts if the floodplain was to be completely avoided. This would have increased the visual impact and the overall cost of the project. The encroachment has been minimized by relocating the alignment as far to the north as possible without causing acquisition of additional right-of-way and by balancing the height of the cuts to minimize visual impacts.

Encroachment 4

Avoidance of this encroachment would require the alignment to be moved to the north. This would necessitate the acquisition of three single-family residences and the construction of large cut slopes and/or retaining walls. Avoidance of this encroachment would require acquisition of additional right-of-way and would create a greater visual impact.

Encroachment 5

This encroachment is required to minimize visual impacts and costs associated with large cuts that would have resulted if the alignment were located farther to the north out of the floodplain. The roadway has been redesigned in an effort to minimize this encroachment.

Avoidance and Minimization Efforts for the Encroachments Associated with the Southern Alignment Alternative

The proposed Southern Alignment Alternative was designed to minimize impacts to floodplain encroachment, cultural resources, sensitive habitats, and right-of-way requirements. The southern alignment is the result of multiple iterations in an attempt to reduce any impacts that would limit or eliminate the existing operations of Vessels Stallion Farm. In an effort to minimize encroachments, the fill slope design was reduced from 4:1 to 2:1, which minimizes the footprint in the floodplain.

The Southern Alignment Alternative would require that cross culverts be used under the highway to convey flow from the creeks to the south of the project to the San Luis Rey River. The culverts would be designed without headwaters rising above an elevation that would cause undesirable backwater depths or outlet velocities. The cross culverts would be used along the roadway to facilitate drainage and wildlife movement. The 29 proposed cross culverts would be constructed using pipe materials per recommendations from Caltrans District 11 Materials Lab.

These features would vary in width from approximately 2.0 to 28.0 feet, and would range in height from 2.0 to 5.0 feet. Two open-span bridges would also be constructed across the San Luis Rey River.

The Vessels property mitigation site grading plan proposes to remove existing soil from within the San Luis Rey River 100-year floodplain in an effort to restore this portion of the river to its natural state based on historical mapping/photos. The exact amount of material to be removed from the location is not known at this time. The final configuration of the mitigation site would be designed to comply with and meet the conditions of the Standard Environmental Reference Chapter 17, Floodplains, to restore and preserve natural and beneficial floodplain values. Removal of material from the floodplain would be done in such a manner as to minimize, to the greatest extent possible, any alteration of the overall river dynamics to protect properties upstream and downstream of the proposed mitigation site.

Encroachment 1

This encroachment encompasses the tie-in point with the intersection of South Mission Road. Avoidance of this encroachment is not possible. The existing SR-76/South Mission Road intersection is within the boundaries of the existing floodplain, and the required connection to South Mission Road places both proposed alignment alternatives within the floodplain. In an effort to minimize the encroachment, the slope designs were reduced from 4:1 (horizontal to vertical) to 2:1, which minimized the footprint in the floodplain. Reducing the slopes from 4:1 to 2:1 was incorporated throughout both alternative designs to minimize floodplain impacts wherever possible.

In an effort to minimize this encroachment, the alignment was adjusted to the north, out of the floodplain as much as practicable. Moving this alternative farther north and completely out of the floodplain at this location would adversely impact the community by requiring the total acquisition of four buildings in the strip mall east of South Mission Road and north of SR-76.

Encroachment 6

Avoidance of this encroachment is not possible. The proposed Southern Alignment Alternative crosses the San Luis Rey River at this location and the proposed San Luis Rey River Bridge – West would have to be built within the floodplain. The encroachment easterly of this crossing is required because the proposed Southern Alignment Alternative must run parallel to existing West Lilac Road, which is just outside the southern boundary of the floodplain. Locating the roadway far enough to the south to avoid the floodplain would have required very large cut slopes or retaining walls and the realignment of West Lilac Road. While avoidance of this encroachment would have reduced visual impacts, it would have resulted in impacts to coastal California gnatcatcher (*Polioptila californica californica*) critical habitat located south of the alignment.

Encroachment 7

This encroachment is required to avoid impacts to the Dulin Ranch buildings, a historical homestead located south of the floodplain. The roadway geometry was redesigned in an effort to minimize this encroachment.

Encroachment 8

Avoidance of this encroachment is not possible. This encroachment results from the proposed San Luis Rey River Bridge – East, which crosses the river so that the proposed roadway can tie into the alignment on the north side of the river leading to the I-15 interchange.

Avoidance, Minimization, and/or Mitigation Measures for the Impacts on Natural and Beneficial Floodplain Values

The avoidance, minimization, and/or mitigation measures for impacts to the natural and beneficial floodplain values can be found for water quality in Section 3.5, Farmlands; Section 3.6, Community Character and Cohesion; 3.14, Water Quality and Storm Water Runoff; 3.16, Paleontology; 3.20, Natural Communities; 3.21, Wetlands and Other Waters; 3.22, Plant Species; 3.23, Animal Species; and 3.24, Threatened and Endangered Species.

Avoidance, Minimization, and/or Mitigation Measures for the Impacts on the Floodplain Elevation

As a way to offset potential floodplain impacts, standard engineering practices would be used, where feasible, to facilitate drainage. The proposed San Luis Rey River bridges present constrictions into the river that would increase the water surface elevation by less than 1 foot upstream of either bridge. These are described in Section 3.13.3, above.

Only Practicable Finding

Executive Order 11988 directs all federal agencies to avoid the long- and short-term adverse impacts associated with the modification of floodplains, to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, and to restore and preserve the natural and beneficial values served by floodplains.

The Existing Alignment Alternative (Preferred Alternative) would encroach longitudinally into the San Luis Rey River 100-year floodplain as designated by FEMA in five locations, for a total of 55.9 acres, and would cross several tributaries draining to the river. Encroachment would be predominantly structural fill on the north bank of the river. The slopes would be armored with RSP to prevent slope erosion and present a rough surface to floodwaters to slow flood velocities. Drainages would be crossed by culverts or bridges sized to facilitate the passage of water without substantially altering the existing drainage patterns and flow characteristics.

Because the Existing Alignment Alternative (Preferred Alternative) encroachment into the 100-year floodplain is entirely longitudinal, its impacts are predominantly edge effects. It would not fragment the wetlands or waters associated with the river. The encroachment in every case is on the outside northern slope of the floodplain and would raise the water surface of the 100-year flood a maximum of 3 inches. This meets the FEMA “low risk” requirement (Title 23 CFR 650.105) that the increase to the regulatory floodway water surface elevation not exceed 1 foot. The Existing Alignment Alternative (Preferred Alternative) would cause little perturbation of current water circulation patterns, flow, and normal water fluctuations. The potential for an acute channelizing effect would be avoided. This would help to maintain existing hydrologic conditions and the river’s biological resources.

The Southern Alignment Alternative would encroach into the San Luis Rey River FEMA-designated 100-year floodplain in four places, for a total of 79.2 acres. One location would be at

the west end of the alignment, one would occur at the transverse crossing associated with the downstream (western) bridge, a third location would be longitudinal structural fill with RSP, and the fourth location would be at the transverse crossing associated with the upstream (eastern) bridge. The encroachments would, by constricting the river's floodway, increase the water surface elevation of the San Luis Rey River approximately 6.7 inches upstream from the western bridge and approximated 6.1 inches upstream from the eastern bridge. These water surface elevations would be below the FEMA "low risk" requirement of 1 foot.

Alternatives to avoid impacts to the floodplain were researched early in the project development process. High construction costs associated with lengthy bridges, tunnels, and large cut slopes made these alternatives infeasible project options. The Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative each had variations of viaduct sizes and placement to avoid floodplain impacts. In the existing alignment of SR-76, the intersection of South Mission Road and SR-76 is within the 100-year floodplain. Therefore, avoidance of the floodplain by either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative would require raising the SR-76/South Mission Road intersection above the flood level without placement of fill in the floodplain. A viaduct or bridge structure would be needed to do so.

The Existing Alignment Alternative (Preferred Alternative) would require berm construction (placement of imported fill in the floodplain) from South Mission Road to 1,200 feet east of Star Track Way, with encroachment into 55.9 acres of the floodplain. Some encroachment would occur for the entire length of this stretch of SR-76. To entirely avoid impacts to the floodplain in this stretch, the bridge or viaduct at the South Mission Road intersection would have to be extended the entire distance to the eastern limit of the encroachment (1,200 feet east of Star Track Way). Based on the length of this bridge, construction would add excessive visual impacts and approximately $280 million to the cost of the project.

Alternatives previously discussed in Chapter 2, the Existing Alignment with 70 mph design speed (Alternative 1 in Table 2.2) and the Existing Alignment with 55 mph design speed (Alternative 2 in Table 2.2) follow the existing SR-76 alignment to the maximum extent possible and had similar project features. The main difference in the alternatives was in the selection of design speed, which then led to differences in the design criteria for the proposed project features. The design speed range for a conventional highway in flat terrain is 55-70 mph, as shown in the 6th Edition of the Highway Design Manual (HDM), Table 101.2. Existing Alignment No. 1, had a design speed of 70 mph, and Existing Alignment No. 2 had a design speed of 55 mph. The Southern Alignment (Alternative 4) had a design speed of 70 mph, and this proposed alignment diverges south from the current SR-76 alignment towards the hills along the southern edge of the San Luis Rey River valley.

At the start of the PA/ED phase, the PDT focused on how each of these three viable alternatives balanced the needs of the roadway design and the need to minimize environmental and community impacts. Using the appropriate design and environmental guidance, such as the HDM and Environmental Handbook, Existing Alignments No. 1 and No. 2 were then merged into a single feasible northerly roadway alternative with a design speed of 65 mph, which is within the range of design speed values shown in HDM Table 101.2; this alternative retained the Existing Alignment name. The design speed for the Southern Alignment was also modified to a 65 mph design speed

In addition to existing deficiencies related to roadway capacity, there are nonstandard roadway features. The geometric standards, from which the existing two-lane rural highway was initially

designed, are no longer functional for the traffic volumes currently using the facility. SR-76, from South Mission Road to I-15, currently has narrow shoulders and varying lane widths. The superelevation, which is the inclination of the bed of a banked road, on existing horizontal curves does not meet current Caltrans standards, and the lengths of tangents separating curves also do not meet current standards for superelevation runoff distances. SR-76 also has many uncontrolled access points, including private driveways, and many of these access points are on horizontal curves or have nonstandard right turn deceleration/acceleration lanes.

In accordance with the Caltrans Highway Design Manual, 6th Edition, the basic lane width for new construction shall be 12 feet and the minimum allowable continuous usable paved shoulder width is 8 ft. Shoulder widths of 10 feet are proposed to provide additional width for roadway maintenance. By implementing current roadway design standards and by improving access to SR-76, the proposed project would improve the existing roadway, improve motorist and worker safety, enhance mobility, and relieve congestion.

Between 2006 and 2010, the Existing Alignment Alternative (Preferred Alternative) was subject to multiple design iterations in a continuing effort to improve its design performance and minimize its impacts to the environment, including waters and wetlands. The design iterations were given alphanumeric labels, with the baseline alignment designated Iteration-1 and the current design designated Iteration-14.

Iteration-1 was a 70-mph design-speed highway intended to modify the existing nonstandard curve radii and superelevation transitions and to meet current Caltrans design standards. The design speed required a shoulder-to-shoulder width of 128 feet and curve radii of 2,100 feet with longer tangents. A lower design speed would allow less width, tighter curve radii, and less right-of-way acquisition, eliminating one relocation, lowering impacts to community character and cohesion, and decreasing direct impacts to sensitive biological resources such as wetlands and sensitive habitat.

Iterations-2 through Iteration-14 took the baseline established with Iteration-1 through a design process, with input from the PDT, which included an environmental component. As studies were completed and sensitive areas were established, the design was refined to avoid or minimize impacts to ESAs. At times, it became necessary to increase impacts to one resource to avoid impacts to another. Therefore, impacts to waters and wetlands changed throughout the project development process.

Iteration-2 reduced the design speed to 55 mph, allowing 1,000-foot radius curves and creating more frequent curvature in the alignment. Impacts to sensitive environmental habitat, including wetlands, were reduced. Because larger superelevation rates were needed for the smaller radii, vehicles would have to turn into a curve banked in the opposite direction. In addition, the smaller curves introduced a greater number of reversing curves.

Iteration-3 realigned the road to improve superelevation rates, and a reduced width median lowered impacts on the community and biological resources. However, more accurate mapping identified an archaeological site near Gird Road that was impacted by the alignment.

Iteration-4 was designed for more avoidance of ESAs. Median width and, consequently, roadway width were reduced, but the narrower medians required larger curve radii.

Iteration-5 further reduced median width to the minimum standard width, but the narrower medians required larger curve radii, incurring environmental impacts in some areas and shifting

the alignment closer to the San Luis Rey River. Environmental impacts were not reduced for the majority of the alignment.

Iteration-6 used a 30-foot-wide median in some locations, allowing tighter curve radii to fit the alignment better to the terrain. Access to SR-76 was reduced by combining Star Track Way and Sage Road traffic into one intersection at Star Track Way, allowing use of the existing SR-76 between Star Track Way and Sage Road as a future frontage road. Areas of larger tangents accommodated a 22-foot-wide median for reduced impacts.

Iteration-7 was an attempt to remove the curvature on the eastern portion of the alignment west of Old Highway 395 near Star Track Way and Sage Road to create a shorter roadway and reduce earthwork, but this induced excessive right-of-way acquisition because of a long tangent with no curves.

Iteration-8 shifted 2,000 feet of the alignment between Gird Road and Star Track Way to reduce or eliminate large cut slopes that required excessive right-of-way takes and wetland impacts.

Iteration-9 adjusted the location of the tie-in to improved SR-76 and combined access for Gird Road and Flowerwood Lane.

Iteration-10 through Iteration-14 made adjustments in engineering parameters that did not change impacts to wetlands.

Encroachment into the floodplain by the Southern Alignment Alternative would occur within the same limits as for the Existing Alignment Alternative (Preferred Alternative) and would involve the entire length from South Mission Road to 1,200 feet east of Star Track Way. In this segment, the Southern Alignment Alternative would encroach into 79.2 acres of floodplain. To avoid this encroachment, the Southern Alignment Alternative would require a viaduct structure similar to the one required for the Existing Alignment Alternative (Preferred Alternative) within the same limits. A structure of this length would add approximately $290 million to the cost of this project.

Design of the two build alternatives evaluated in this document focused on minimizing floodplain encroachment to the extent possible. For the Existing Alignment Alternative (Preferred Alternative), the design as proposed would result in a maximum 3-inch increase in the water surface elevation. The design of the Southern Alignment Alternative would result in a maximum increase in water surface elevation of 6.7 inches. Neither of the proposed build alternatives would support incompatible floodplain development, interrupt any transportation routes upstream, or substantially increase risk to life or property. These factors, balanced against the greatly increased cost of floodplain avoidance, led to elimination of the Floodplain Avoidance Alternative from consideration as part of either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative.

Based on studies carried out by Caltrans, as assigned by FHWA, no practicable alternative to the proposed alternative exists (23 CFR 650, Subpart A). All other potential alternatives are not possible within reasonable natural, social, and economic constraints. In addition, all measures to minimize potential harm within the floodplain, consistent with regulations issued in accord with Section 2(d) of Executive Order 11988 have been taken. Further, a public notice, as required by Executive Order 11988, has been circulated containing an explanation of why the action is proposed to be located in the floodplain.

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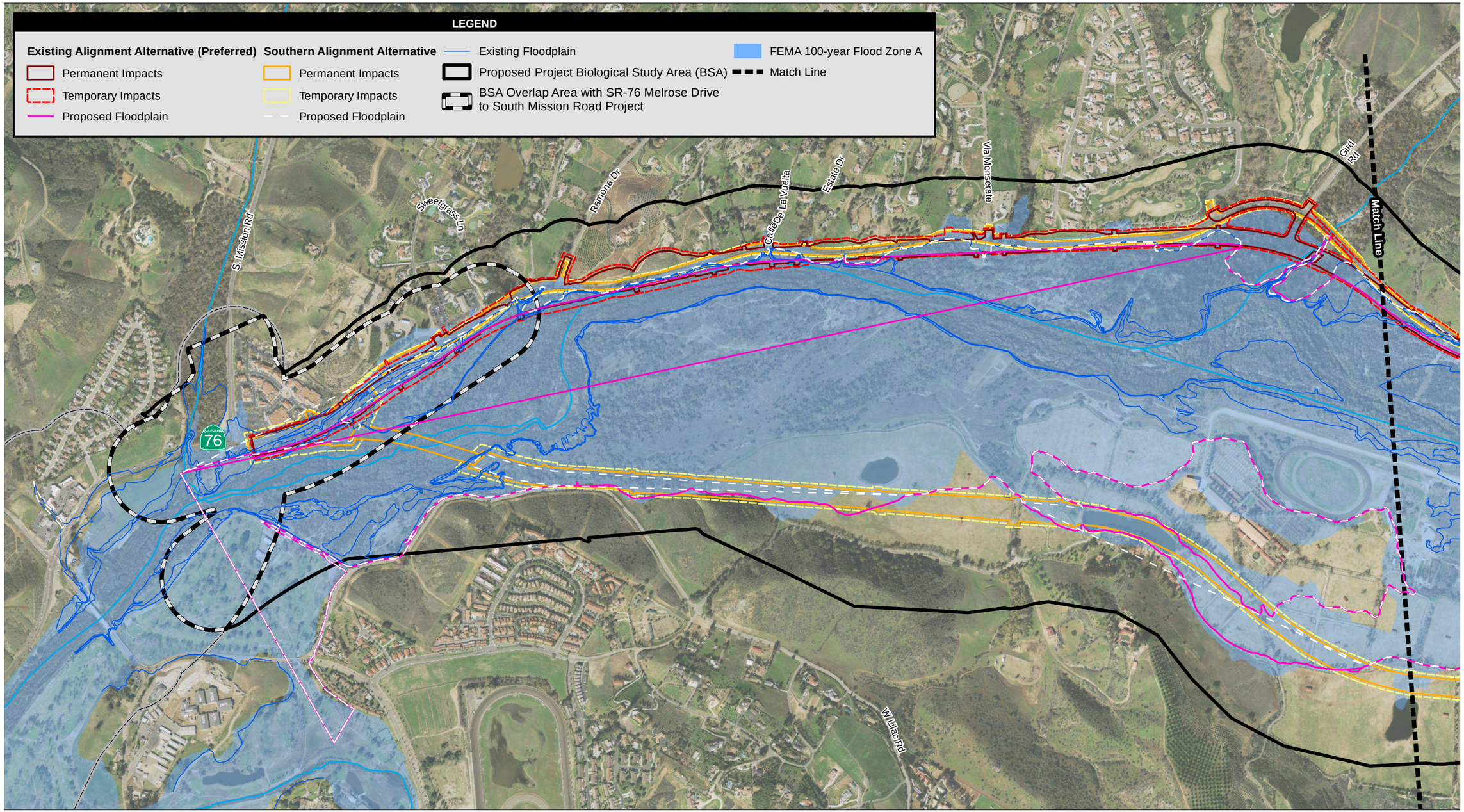


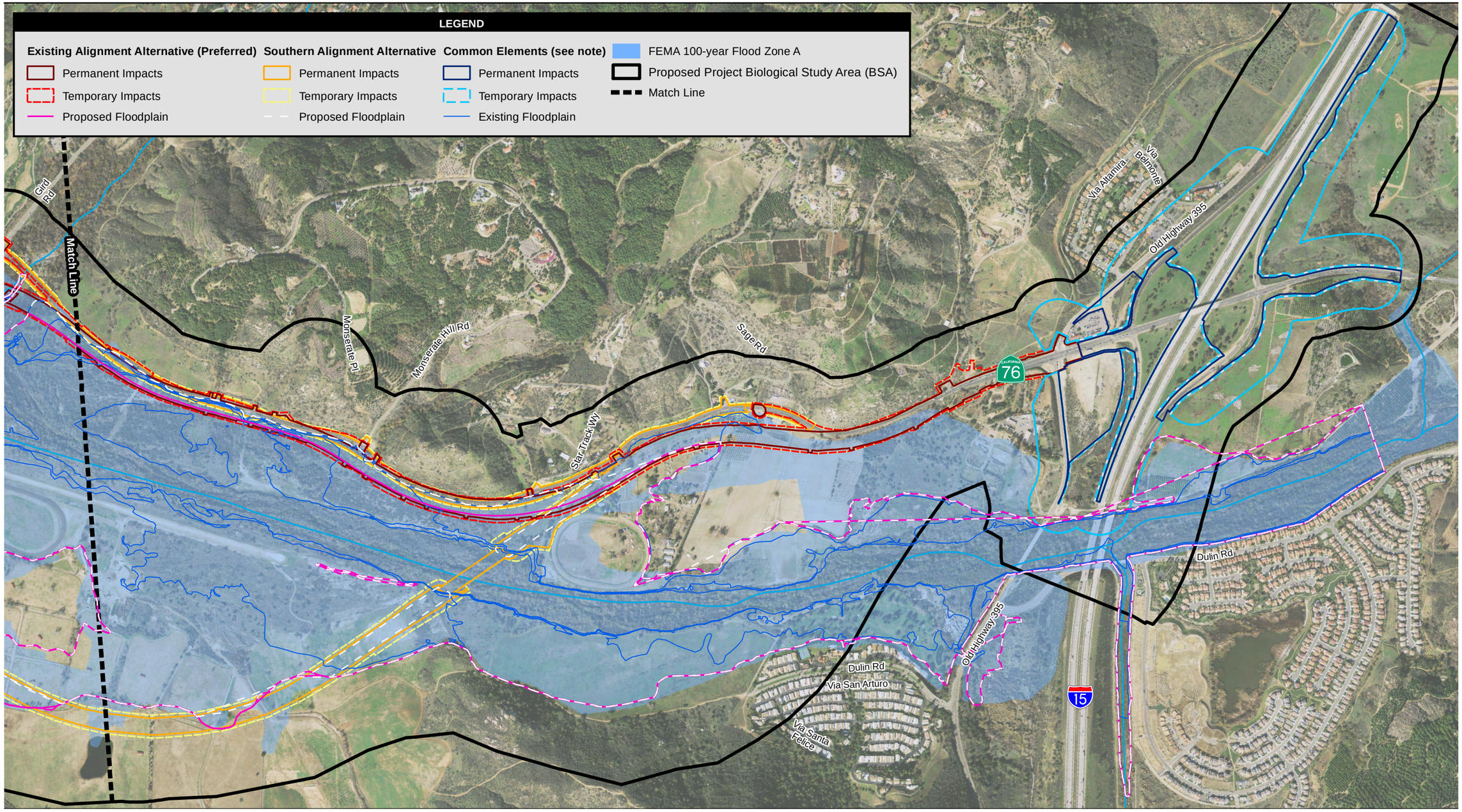
Source: DigitalGlobe 2008; Dokken Engineering 2010; SanGIS 2009; FEMA 2007

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.13-1a
Floodplain Map with Existing (Preferred) and Southern Alignment Alternatives

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_13_1a_floodplain.mxd, 10/9/2011, augellop



Source: DigitalGlobe 2008; Dokken Engineering 2010; SanGIS 2009; FEMA 2007

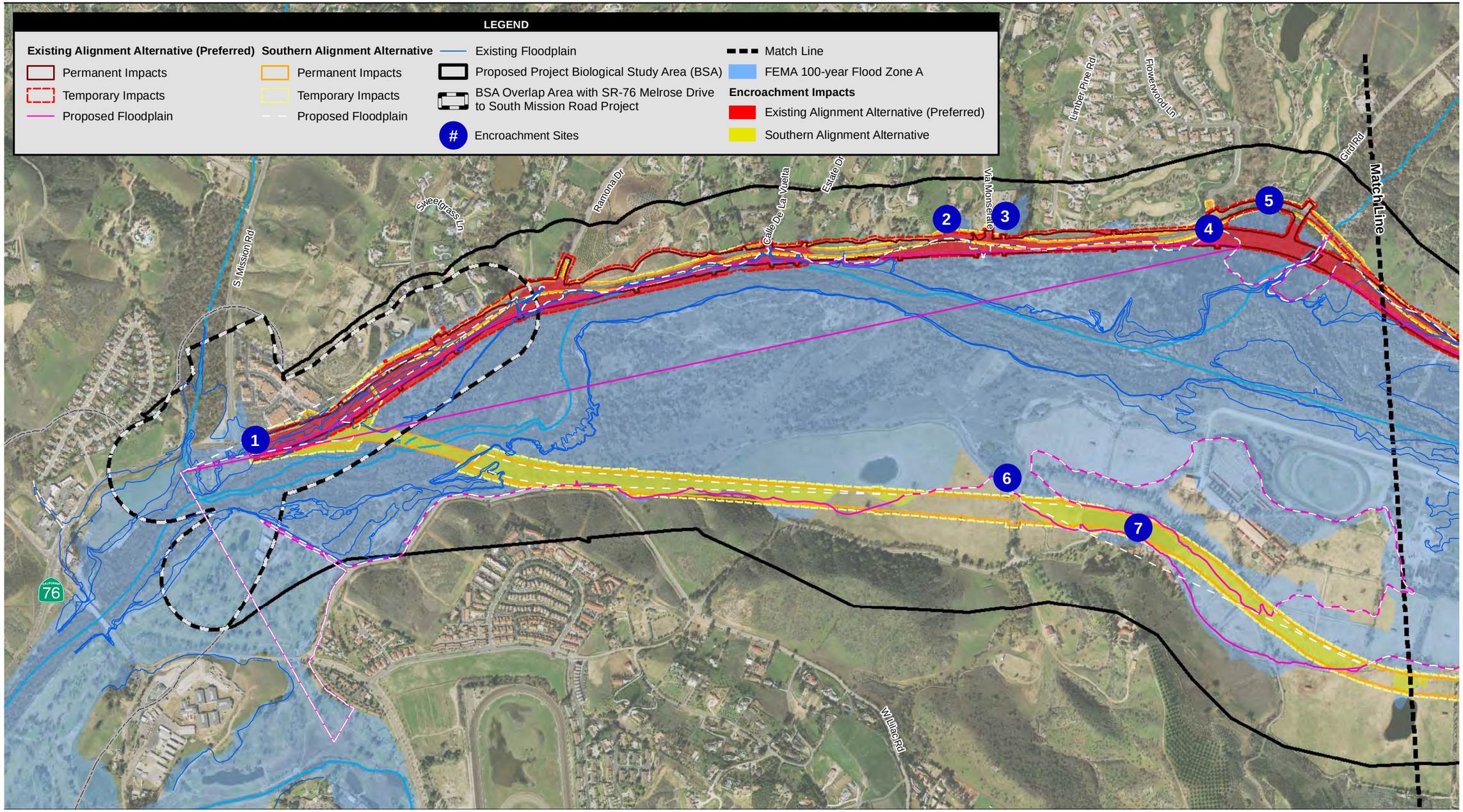
1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.13-1b

Floodplain Map with Existing (Preferred) and Southern Alignment Alternatives



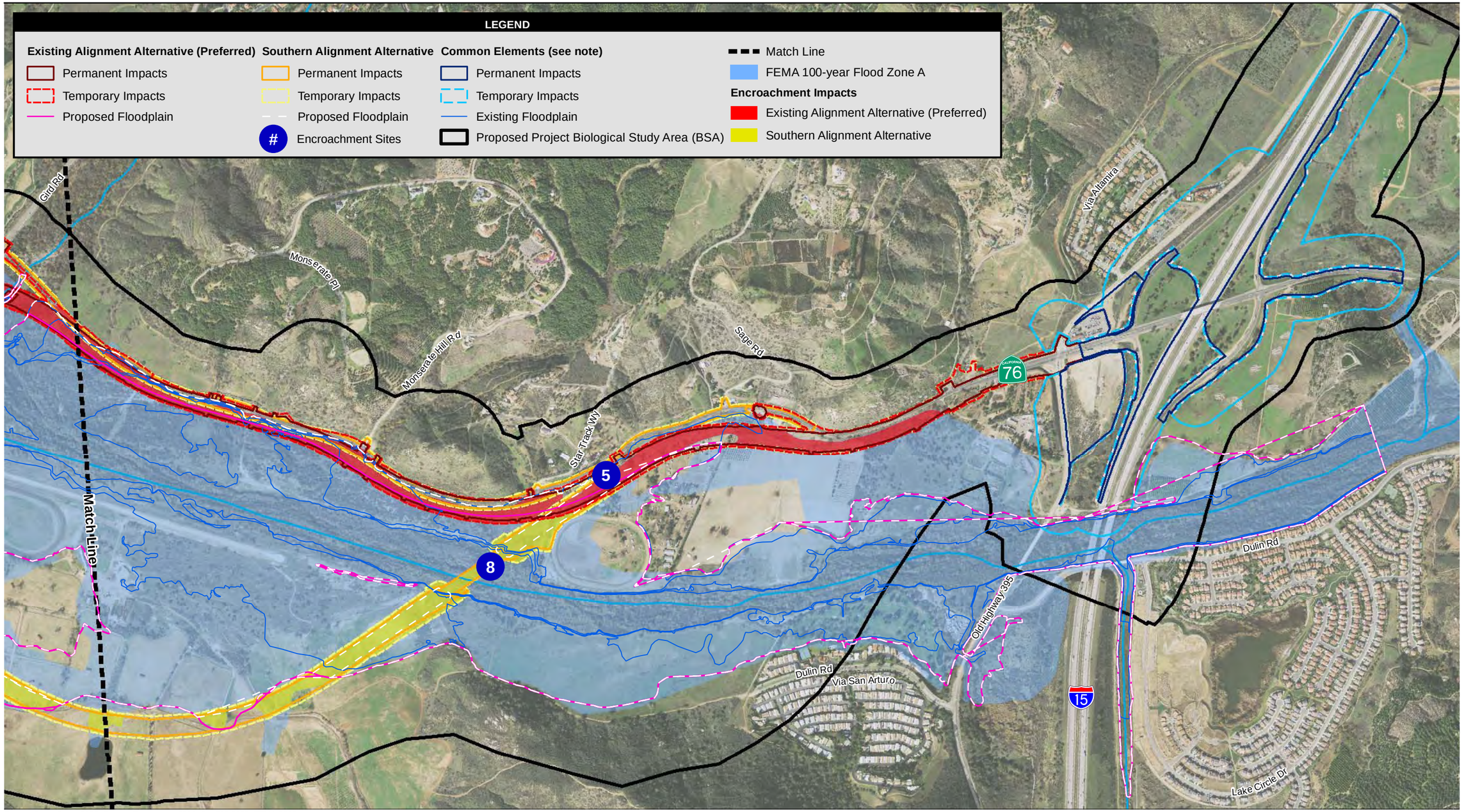
Source: DigitalGlobe 2008; Dokken Engineering 2010; SanGIS 2009; FEMA 2007

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.13-2a
Floodplain Encroachments for the Existing (Preferred) and Southern Alignment Alternatives

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_13_2a_floodplain encroachment base_wht.mxd, 10/5/2011, augellop



Source: DigitalGlobe 2008; Dokken Engineering 2010; SanGIS 2009; FEMA 2007

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.13-2b

Floodplain Encroachments for the Existing (Preferred) and Southern Alignment Alternatives

3.14 WATER QUALITY AND STORM WATER RUNOFF

This section describes the regulations and policies affecting local water quality and storm water runoff and drainage, identifies impacts that may result from the proposed project, and recommends mitigation measures to reduce potential impacts, where appropriate.

3.14.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972 Congress amended the Federal Water Pollution Control Act, making the addition 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. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are as follows:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity, which may result in a discharge to waters of the U.S., to obtain certification from the state that the discharge would comply with other provisions of the act. (Most frequently required in tandem with a Section 404 permit request, as discussed below.)
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. 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.”

USACE issues two types of 404 permits: Standard and General permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide permit may be permitted under one of USACE’s Standard permits. For Standard permits, the USACE decision to approve is based on compliance with USEPA’s Section 404 (b)(1) Guidelines (USEPA CFR 40 Part 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by USEPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative

that would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences. Per the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements (33 CFR 320.4.) A discussion of the LEDPA determination is included in Section 21, Wetlands and Other Waters.

State Requirements: Porter-Cologne Water Quality Control Act

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 gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. 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 then 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 the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify 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. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollution Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water dischargers, including MS4s. USEPA defines an 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, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water. The SWRCB has identified Caltrans as an owner/operator of an MS4. This permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for 5 years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit, under revision at the time of this update, contains three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the state to effectively control storm water and non-storm water discharges; and
3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) best management practices (BMPs) and other measures.

To comply 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 assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. 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 latest SWMP to address storm water runoff.

Part of and appended to the SWMP is the Storm Water Data Report (SWDR) and its associated checklists. The SWDR documents the relevant storm water design decisions made regarding project compliance with the MS4 NPDES permit. The preliminary information in the SWDR prepared during the Project Initiation Document (PID) phase would be reviewed, updated, confirmed, and, if required, revised in the SWDR prepared for the later phases of the project. The information contained in the SWDR may be used to make more informed decisions regarding the selection of BMPs and/or recommended avoidance, minimization, or mitigation measures to address water quality impacts.

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 which result in a Disturbed Soil Area (DSA) of 1 acre or greater, and/or are smaller sites that are part of a larger 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 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. 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, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Department's Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water body must obtain a 401 Certification, which certifies that the project would be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by USACE . The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue WDRs under the State Water Code that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

3.14.2 Affected Environment

A Water Quality Report was completed in August 2010 and a preliminary Storm Water Data Report was completed in October 2011.

The proposed project is located within the San Luis Rey Hydrological Unit (HU), Communities within the HU include Valley Center, Hidden Valley, Bonsall, and Fallbrook; portions of Vista, Oceanside, and Marine Corps Base Camp Pendleton; and areas of unincorporated San Diego County. Within the HU, the proposed project is within the Bonsall Hydrologic Subarea (HSA) 903.12 in the Lower San Luis Hydrologic Area (HA) (Figure 3.14-1).

The receiving water body for the proposed project is the San Luis Rey River, with drainage through the river itself and its associated tributaries. The current roadway facility consists of 26.7 acres of untreated impervious surfaces. The current alignment of SR-76 is a longitudinal encroachment along the river, with portions extending into the floodplain. The proposed project

would cross these permanently and seasonally flowing waterways and the floodplain. It is proposed that bridges, box culverts, and cross culverts be installed to convey both stream and storm water from the upstream side of the road to the downstream side, with as much roadway runoff as practicable being treated by detention basins and biofiltration swales and strips. According to the San Diego Basin Plan, existing beneficial uses of water bodies within the San Luis Rey HU include the following:

- Agricultural supply
- Industrial service supply
- Contact and water recreation
- Preservation of Biological Habitats of Special Significance
- Warm freshwater habitat
- Wildlife habitat
- Rare, threatened, or endangered species
- Cold freshwater habitat
- Freshwater Replenishment
- Hydropower generation
- Municipal and domestic supply
- Spawning reproduction, and/or early development

San Luis Rey River is on the San Diego RWQCB's 2010 CWA Section 303(d) List of Water Quality Limited Segments, which describes the water quality impairments, potential pollutant sources, and TMDL priority as shown in Table 3.14-1. Table 3.14-1 also lists other impaired water bodies located within the San Luis Rey HA. Listed 303(d) water bodies do not meet current water quality standards and, therefore, are subject to action plans to improve their water quality. The RWQCB has been working to assign TMDLs for the constituents of concern on the San Luis Rey River, but no effluent limits have been established to date.

3.14.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

There is the potential for toxic spills to occur on either alignment alternative under unintended circumstances; however, the Southern Alignment Alternative with two bridges has greater potential to impact the water quality of the San Luis Rey River from such spills. If such a situation were to occur, hazardous waste personnel would be the first responders.

There would be a temporary movement/recirculation of water, if dewatering was necessary. The water would be returned to the San Luis Rey River and would percolate back to groundwater. The targeted design constituents (TDCs) in the San Luis Rey River are phosphorus and Total Nitrogen as N. The TDCs listed for the San Luis Rey River are not from vehicles.

Table 3.14-1. TMDLs and 303(d)-Listed Water Bodies

Name	Pollutant/Stressor	Potential Source	Proposed TDML Completion	Estimated Size Affected
San Luis Rey River, Lower (west of I-15)	Chloride	Unknown Nonpoint Source Unknown Point Source Urban Runoff/Storm Sewers	2019	19 Miles
	Enterococcus	Source Unknown Unknown Nonpoint Source Unknown Point Source	2021	19 Miles
	Fecal Coliform	Unknown Nonpoint Source Unknown Point Source Urban Runoff/Storm Sewers	2021	19 Miles
	Phosphorus	Unknown Nonpoint Source Unknown Point Source Urban Runoff/Storm Sewers	2021	19 Miles
	Total Dissolved Solids	Agriculture/Storm Runoff Flow Regulation/Modification Golf Course Activities Industrial Point Sources Natural Sources Surface Mining Unknown Nonpoint Source Unknown Point Source Urban Runoff/Storm Sewers	2019	19 miles
	Total Nitrogen as N	Unknown Nonpoint Source Unknown Point Source Urban Runoff/Storm Sewers	2021	19 Miles
	Toxicity	Unknown Nonpoint Source Unknown Point Source Urban Runoff/Storm Sewers	2021	19 Miles
San Luis Rey River, Upper (east of I-15)	Total Nitrogen as N	Unknown Nonpoint Source	2021	35 Miles

TMDL= Total Maximum Daily Load

The proposed project would add additional surface paving area. Under the Existing Alignment Alternative (Preferred Alternative), the proposed project would change the existing two-lane facility to a four-lane facility, and may potentially increase total or peak runoff discharges. The Existing Alignment Alternative (Preferred Alternative) would increase total impervious surfaces from 26.7 acres to approximately 62.7 acres. Under the Southern Alignment Alternative, a four-lane facility would be constructed while the current SR-76 roadway would remain in place and would not be retrofitted for treatment BMPs. The Southern Alignment Alternative would add 68.3 acres of new impervious surfaces while the 26.7 acres of the current SR-76 roadway would remain untreated. New construction could also have an effect on downstream channel stability through changes in the rate and volume of runoff, the sediment load due to changes in the land surfaces, and other hydraulic changes from stream and/or creek encroachments, crossings, or realignment. Although the overall pavement area would increase, proposed biofiltration swales and strips and grading modifications would reduce the increased flow rates to minimize additional storm water runoff to the San Luis Rey River. These are described further below.

Currently, there is no treatment of runoff on the existing 26 acres of impervious roadway. Treating 60-80 percent of the impervious surfaces from the proposed project would reduce adverse impacts from roadway runoff and would improve water quality in the San Luis Rey River. The current roadway facility consists of 26.7 acres of untreated impervious surfaces.

The Existing Alignment Alternative (Preferred Alternative) would increase total impervious surfaces by 36 acres to approximately 62.7 total acres. The Southern Alignment Alternative would add 68.3 acres of new impervious surfaces while the 26.7 acres of the current SR-76 roadway would remain untreated.

The total disturbed soil area is based on construction activities and is 367 acres, which includes DSA for the Interchange and roadway projects and includes both the Tabata and Vessels mitigation sites. The treatment BMPs that have been identified to treat stormwater runoff of 66 acres are going to be installed. Site conditions, hydraulics, right of way are all taken into consideration when design came up with the 66 acres of treatment. The new impervious area created by the project is 44.7 acres. Both DSA and new impervious areas are shown in the Storm Water Data Report.

The proposed project may have potential short-term impacts to water quality during construction activities due to soil disturbance. Potential pollutants of concern include vehicle fluids, oil, trash, and debris, which would require construction BMPs to prevent runoff into any local water body.

All of the proposed build alternatives provide treatment that does not exist under current SR-76 conditions.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would have a disturbed soil area of approximately 193 acres. The Existing Alignment Alternative (Preferred Alternative) would treat approximately 66 percent of roadway runoff and consists of approximately 41.6 acres of treated impervious surface and approximately 21.1 acres of untreated impervious surfaces. Depending on site conditions where BMPs may be installed.

Caltrans prepared and submitted to USACE an Alternatives Analysis in accordance with the requirements of CWA Section 404(b)(1), identifying the Existing Alignment Alternative as the Preferred Alternative. USACE, in a letter dated April 18, 2011, concurred with the preliminary identification of the Existing Alignment Alternative as the Preferred Alternative (see Chapter 5, Comments and Coordination).

Southern Alignment Alternative

The Southern Alignment Alternative would have a disturbed soil area of approximately 193 acres. The Southern Alignment Alternative would treat approximately 80 percent of roadway runoff on the newly constructed SR-76 while the 26.7 acres of untreated impervious surfaces of the current roadway would have no treatment of runoff. The Southern Alignment Alternative consists of approximately 54.9 acres of treated impervious surface and approximately 13.4 acres of untreated impervious surface. The current SR-76 roadway would remain in place. Depending on site conditions where BMPs may be installed.

Partial Cloverleaf Interchange (DV-1)

The partial cloverleaf interchange would have a disturbed soil area of approximately 50 acres and would treat approximately 54 percent of total roadway runoff under post construction conditions. This interchange configuration would consist of approximately 13.9 acres of treated impervious surface and approximately 12.0 acres of untreated impervious surface.

Spread Diamond Interchange (DV-2)

The spread diamond interchange would have a disturbed soil area of approximately 40 acres and would treat approximately 50 percent of total roadway runoff under postconstruction conditions. This interchange configuration would consist of approximately 11.7 acres of treated impervious surface and approximately 11.7 acres of untreated impervious surface.

No Build Alternative

Currently, there are no roadway runoff treatment facilities within the SR-76 corridor. Under the No Build Alternative, roadway runoff would continue to flow untreated into the San Luis Rey River.

3.14.4 Avoidance, Minimization, and/or Mitigation Measures

All of the proposed build alternatives provide greater treatment than current SR-76 conditions. The current roadway facility consists of 26.7 acres of untreated impervious surfaces.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would treat approximately 66 percent of roadway runoff.

Southern Alignment Alternative

The Southern Alignment Alternative would treat approximately 80 percent of roadway runoff on the newly constructed SR-76 while the 26.7 acres of untreated impervious surfaces of the current roadway would have no treatment of runoff.

Partial Cloverleaf Interchange (DV-1)

The partial cloverleaf interchange would treat 54 percent of total roadway runoff under postconstruction conditions.

Spread Diamond Interchange (DV-2)

The spread diamond interchange would treat 50 percent of total roadway runoff under postconstruction conditions.

Several design iterations were investigated during project development to minimize impacts to the river and floodplain. In efforts to minimize adverse impacts to the San Luis Rey River, the proposed project design located the highway away from the river wherever possible. Complete avoidance of the floodplain is not practicable.

The SWMP describes the procedures and practices that Caltrans would implement to reduce the discharge of pollutants to the storm water drainage system that serves the highway and highway-related properties, facilities, and activities, as well as the associated receiving waters. The SWMP divides the BMPs into separate categories of project development, from the planning and design phases through the construction, operations, and maintenance phases.

Construction Site BMPs

The Storm Water Pollution Prevention Plan (SWPPP) is a document that is prepared by the Contractor and submitted to the Resident Engineer, the document addresses water pollution control for a construction project. These BMPs are typically implemented in all Caltrans construction projects; they include practices for soil stabilization, sediment control, wind erosion control, tracking control, non-storm water management and waste management. Some of the approved construction site BMPs have been designated as “minimum requirements”; these BMPs will be implemented in all highway construction projects statewide when they are applicable to a project.

If dewatering is performed in this area, an NPDES permit would be required for discharge of water from groundwater to surface water in accordance with San Diego RWQCB (Order No. R9-2008-0002, NPDES No. CAG919002).

Water quality standards and WDRs during construction would be addressed in the project design and construction phase pursuant to Order 2009-009-DWQ. The SWMP describes how Caltrans would comply with these provisions and establish BMPs for construction of the proposed facilities, including source, erosion, sediment, and non-storm-water controls to be installed and maintained throughout construction. The construction BMPs are temporary and are removed as treatment BMPs are established. As part of the evaluations, pollution prevention, treatment, and construction BMPs were evaluated and would be incorporated into project plans to minimize the potential for non-permitted discharges. These are described further below.

During the project development process, predicted storm water runoff onto the project site would be calculated and, where possible, appropriate control measures would be implemented to convey concentrated flows around or through the site in a manner that would not cause additional erosion.

Potential pollutants from material storage and handling procedures. These would be addressed through incorporating the appropriate control measures, including solid waste management, concrete waste management, street sweeping, spill prevention control, and designated staging areas for material and equipment.

Design Pollution Prevention BMPs

Design pollution prevention BMPs are permanent measures that improve storm water quality after construction is completed. These BMPs were developed in response to three Caltrans objectives: prevent downstream erosion, stabilize disturbed soil areas, and maximize vegetated surfaces.

Appropriate measures would be implemented to ensure that runoff from SR-76 would not adversely degrade downstream hydrologic conditions or stability. Transportation improvement projects often result in the addition of paved surfaces that increase total or peak runoff discharge volumes. Consistent with Caltrans design protocol, these conditions are thoroughly evaluated to determine if any impacts would result from the proposed project. Through this evaluation, the following would be considered to minimize downstream impacts to channels:

- Modifying channel lining materials (both natural and human-made), including vegetation, geotextile mats, rock, and riprap;
- Dissipating energy at culvert outlets; and
- Smoothing the transition between culvert outlets/headwalls/wing walls and channels to reduce turbulence and scour.

Preservation (to the maximum extent practicable) of existing vegetation is recommended to provide erosion and sediment control benefits. Temporary BMPs (e.g., soil stabilization, sediment control, wind erosion control, tracking control, non-storm-water management, and waste management and materials pollution control) would be implemented to contain both storm water and non-storm-water discharges during construction per the SWMP.

BMPs such as preserving existing vegetation, installing ditches, dikes, swales and overside drains to convey concentrated runoff, and slope rounding and hard surfaces to protect slopes would be evaluated for implementation to achieve the objective of controlling erosion and preventing sediment transport during construction as well as after.

Treatment BMPs

Treatment BMPs are structural BMPs designed to treat storm water runoff to the maximum extent practicable. A structural BMP is a constructed facility or measure to help protect receiving water quality and control stormwater quality. Examples include biofiltration systems, infiltration devices, detention basins, gross solid removal devices, media filters, mutil-chamber treatment trains, and wet basins. On this project the majority of structural BMPs to be constructed are bioswales and biostrips. Caltrans-approved treatment BMPs were evaluated for implementation for the proposed project, (biofiltration strips/swales, infiltration devices, detention devices, and gross-solid-removal devices), were found to be appropriate for this project. These approved treatment BMPs are considered technically and fiscally feasible and have been found to be constructible, maintainable, and effective at removing pollutants to the maximum extent practicable. Of these BMPs, bioswales, biostrips, and detention basins are preferred. Bioswales have small footprints, are easy to install, and are easy to maintain. Detention basins are geometrically practical in certain locations of the project footprint and provide an opportunity to treat storm water where the roadway geometry and grading prevent the installation of bioswales. As the project progresses through design, the locations of the treatment BMPs would be further evaluated relative to right-of-way or environmental constraints.. Based on the environmental recommendations, the district erosion-control specialist, in coordination with the district biologist and district landscape units, would determine the appropriate planting/seeding mix that would meet the water quality treatment needs and the landscaping scheme of the area.

The proposed SR-76 project would implement treatment of runoff from the roadway that currently does not exist. The implementation of the proposed BMPs and the pollutants removed as a result may constitute a net benefit to the water quality in the San Luis Rey River.

Both build alternatives would use biofiltration swales/strips. Biofiltration swale BMPs are linear channels that are lined with vegetation for the purpose of storm water conveyance and treatment. Biofiltration swales are designed to reduce the velocity of storm water runoff and remove particulate pollutants. Caltrans released the results of a BMP pilot program in 2004 that concluded that these swales provide moderate treatment efficiencies for particulate and dissolved metals, grease and oil, and total suspended solids. The Caltrans BMP pilot program

concluded that biofiltration swales and strips were among the least expensive devices and were among the best performers in reducing sediment and heavy metals in runoff. The test sites used in the pilot program were similar in many ways to the vegetated shoulders and conveyance channels common along highways in many areas of the state. Consequently, areas along the project alignment that would be protected by biofiltration swales could expect to see water quality benefit comparable to the benefits found at engineered sites. The load reduction observed in the BMP pilot program is generally comparable to that measured by Barrett et al. (1998) in highway medians and adjacent vegetated channels designed solely for storm water conveyance. Consequently, swales and other vegetated surfaces that are not engineered specifically for water quality may still provide substantial water quality benefit. Overall, the average load reduction observed for metals in the Caltrans BMP pilot program also is comparable to that observed in more complex devices such as media filters (Caltrans 2004).

Within the graded regions of the proposed project improvements, the proposed drainage system includes the installation of AC Overside Drains with riprap material to direct runoff through the biofiltration swales prior to entrance into existing underground pipe systems. The cross section of the swales would be trapezoidal, with a minimum top width of 8 feet, a depth of 6 inches, and side slopes of 5:1 or flatter. The biofiltration swales would be designed to meet treatment criteria for water quality flow and conveyance criteria for design storm flows.

A detention basin is a permanent device formed by excavating and/or constructing an embankment so that runoff is temporarily detained under quiescent conditions, allowing sediment and particulates to settle before the runoff is discharged. Design throughout the project limits would be influenced by the following parameters: pavement area changes, biofiltration swale installations, channel extensions or adjustments, and grading modifications.

The proposed project would include one detention basin. The detention basin would be constructed along the existing alignment at the western side of the intersection of SR-76 and Ramona Road as a part of the Existing Alignment Alternative (Preferred Alternative). The detention basin has been designed to the standards specified in the 2007 Storm Water Quality Handbooks, Appendix B, and specific design criteria of the detention basin are described in the SWDR prepared for the proposed project.

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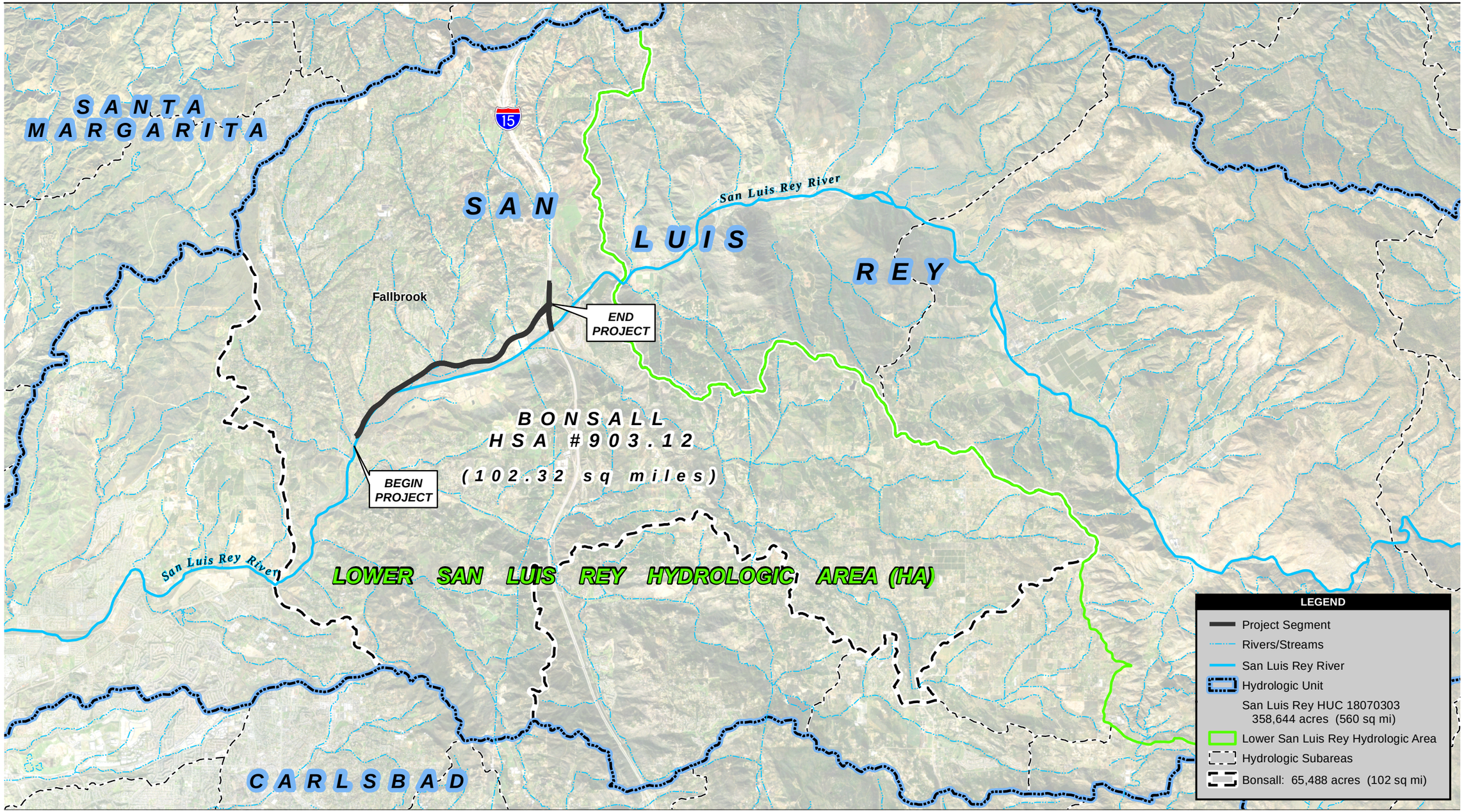

Source: DigitalGlobe 2008; CalHydro 2007; ESRI 2007

1.8 0.9 0 1.8 Miles

Scale: 1 = 115,494; 1 inch = 1.8 miles

Figure 3.14-1
San Luis Rey Hydrologic Unit

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_14_1_SR76_hydro_subareas.mxd, 10/6/2011, augellop

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3.15 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

This section evaluates the environmental consequences of the proposed project as they relate to geology and soils. Issues addressed include soil characteristics, erosion potential, and seismic and geologic hazards. A Preliminary Geologic Study, dated June 2007; a Preliminary Geomorphology and Geophysical Study, dated November 2009; and a District Preliminary Geotechnical Report, dated April 2010, were prepared for this project.

3.15.1 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. 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.

The San Diego County General Plan Conservation and Open Space Element identifies a policy to ensure that unique geologic features are conserved for educational and/or scientific purposes. Policy COS-9.2 states that development would be required to minimize impacts to unique geological features from human-related destruction, damage, or loss. In addition, the General Plan's Safety Element identifies policies to reduce seismic hazards, landslides, mudslides, and rock fall hazards.

3.15.2 Affected Environment

Geomorphology

The project area is located in the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges Geomorphic Province is characterized by northwest-trending mountains and valleys and associated northwest-trending faults and fault zones. San Diego County can be divided into three distinct geomorphic regions: the Coastal Plain as exposed west of the Peninsular Ranges; the Peninsular Ranges; and the Salton Trough east of the Peninsular Ranges. This geomorphic division reflects a basic geologic difference between the three regions, with Mesozoic metavolcanic, metasedimentary, and plutonic rocks predominating in the central mountain range, and primarily Cenozoic sedimentary rocks to the west and east of the central mountain range. The irregular contact between these geologic regions reflects the ancient topography of this area before it was buried by the thick sequence of Cretaceous and Tertiary sedimentary rocks deposited over the last 75 million years by ancient rivers and in ancient seas (Demeré 2008).

The San Luis Rey River and floodplain is the central feature in the project area. Upland areas are north and south of the San Luis Rey River Valley. Several small streams and drainages trend downhill from the upland areas to the river.

The upland areas are generally underlain by Cretaceous-age plutonic rocks (chiefly granodiorite and tonalite) that rise to heights of 200 feet to 400 feet above the valley floor. The surfaces of the upland areas have been eroded, exhibited by typically rounded hilltops and steep-sided rills and gullies. The granodiorite and tonalite rocks are generally covered with a thin mantle of residual soil (usually silty sands and sandy silts) with occasional rock outcrops. The part of the project area north of SR-76 and west of Old Highway 395 is characterized by large boulder outcrops where less resistant rock has been eroded. The majority of the rock outcrops appear massive with the tonalite rocks darker colored than the granodiorite rocks (Dokken 2010).

The lower regions of the project area, the San Luis Rey River floodplain and associated tributaries, are overlain by older Quaternary-age alluvial sediments and more recent alluvium along the stream channels. The older alluvial sediments consist of unconsolidated sands and silts, while the more recent alluvial materials (riverwash) generally consist of unconsolidated sands, gravels, and cobbles (Dokken 2010).

The general stratigraphy of the project area (Dokken 2010), from youngest to oldest, consists of:

- Active channel and wash deposits: late Holocene-age, unconsolidated to locally poorly consolidated, sand and gravel deposits in active washes of streams.
- Active alluvial floodplain deposits: late Holocene-age, unconsolidated to locally poorly consolidated, sand and gravel deposits in active alluvial floodplains.
- Older alluvial floodplain deposits: Pleistocene-age, mostly moderately well consolidated, poorly sorted, permeable floodplain deposits.
- Granodiorite (Indian Mountain): Cretaceous-age, biotite leucocratic granodiorite; white, fine to medium-grained and massive.
- Tonalite (undivided): Cretaceous-age, mostly hornblende-biotite tonalite; coarse-grained, light gray.
- Metavolcanic and metasedimentary rocks (undivided): Cretaceous and Jurassic-age, low grade (greenschist facies) rocks that are in part coeval with, and in part older than, the Cretaceous plutonic rocks with which they lie in contact.
- Tonalite of Couser Canyon: Cretaceous-age hornblende-biotite tonalite; coarse-grained and massive, containing some granodiorite and characterized by an abundance of pegmatite dikes.

Soils

According to the Soil Survey of San Diego County, 42 different soil units are identified in the project area. The upland areas are covered by sandy loams, coarse sandy loams, cobbly and rock loams, and occasional clay loams and rock outcrops. Soils on the steeper upland areas tend to form a thin veneer over the parent bedrock. The bedrock ranges from soft (weathered) to relatively hard (unweathered). Soils in the San Luis Rey River floodplain consist of recent alluvium, characterized as sands and riverwash (coarse unconsolidated sands and silts with varying amounts of gravels and cobbles) (Dokken 2010).

The potential for landslides in the project area appears to be low, based on several site visits and historical mapping. The presence of large boulders in low-lying areas indicates a potential for rock falls in the areas adjacent to upland peaks or slopes. In general, the potential for soil

erosion is severe within the San Luis Rey River channel and floodplain and ranges from moderate to slight in the upland areas. Several of the cross culverts along SR-76 are partially or completely blocked, indicating erosion and deposition from the upland areas (Dokken 2010).

Subsurface testing indicates that residual soils within the upland areas are generally decomposed granites consisting of medium dense to very dense silty sands, sands, and hard silts. Alluvial soils in the San Luis Rey River floodplain consist of medium dense to dense silty and clayey sands and dense to very dense well-graded and poorly graded sands with varying amounts of silt (Dokken 2010).

The majority of soils in the upland granitics consist of nonplastic sands, silty sands, and silts having a low shrink-swell potential. Low-lying areas in the San Luis Rey River Valley may contain clay deposits with moderate to high shrink-swell potential. Compressible soils are not expected in upland granular soils. Lowland areas in the river valley may contain areas of soft or loose soils that may be susceptible to settlement under structural loads. No collapsible soil or record of damaging subsidence of soils in the project area was found (Dokken 2010).

Water

The San Luis Rey River is the primary surface water feature and is one of San Diego's larger drainages. The river is a small meandering stream for most of the year, with swelling during the wet season. Several portions of the existing and proposed highway embankments extend into the 100-year floodplain.

Numerous small streams and drainage features converge with the San Luis Rey River in the project area, including Keys Creek, which is outside the study area near the east end of the study area, and Live Oak Creek along Gird Road. During the drier months, the San Luis Rey River typically conveys little water and its tributaries are dry. However, during wetter months, the river can convey large flows during storms, as indicated by the wide floodplain in the project area. Therefore, a large portion of the project area has a high potential for surface flooding (Dokken 2010).

Groundwater levels in the San Luis Rey River basin changed radically in the 1950s and 1960s due to overpumping. Since the advent of imported water sources, levels have risen to near predevelopment levels and average from 10 to 20 feet below land surface. Groundwater may occur as near-surface perched water within the residual soils overlying upland bedrock, as deep ground water within the fractured granitic rock, and as basin groundwater within the alluvial sediments of the San Luis Rey River Valley (Dokken 2010).

Seismic

San Diego County is located on the eastern portion of the Pacific Plate, which grinds along the edge of the North American Plate and is characterized by active northwest-trending faults and associated seismicity. Major faults near the proposed project include the San Andreas, San Jacinto, Elsinore, Coronado Banks, Newport-Inglewood, and Rose Canyon faults. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the highway facility.

The Peninsular Ranges region has had moderate seismic activity compared to other portions of California based on historical records spanning almost 200 years. A records search for earthquakes with a moment magnitude between 4.0 and 9.0 within a radius of 100 kilometers of

the project area revealed 495 earthquakes. The maximum magnitude earthquake recorded in the search area was an 1858 tremor with an approximate magnitude of 7.0 with an epicenter approximately 51 miles northwest of the project area. The closest recorded earthquake, with an estimated magnitude of 4.0, occurred in 1935 approximately 11 miles northeast of the project area (Dokken 2010).

There are no known faults within the immediate project area and ground surface rupture due to faulting is considered unlikely.

Loose sands and silts in areas of high groundwater are prone to liquefaction, seismically induced settlement, loss of bearing capacity, development of lateral loads, and lateral spreading when subjected to high earthquake-induced ground vibrations. This is a major concern for the stability of bridges due to the potential for lateral spreading near the abutments.

3.15.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

Substantial grading would be required to construct the new roadway along the Existing Alignment Alternative (Preferred Alternative). Cut slopes may have heights as high as 100 feet, while fill slopes may be as high as 16 feet. Cut slopes in the weathered granitic rock may require some form of rock-fall protection. Generally, slope ratios between 2:1 (horizontal: vertical) to 1.2:1 do not present substantial rock roll-out behavior. Rock roll-out and rock bounce are more likely to occur at slope ratios of 1.3:1 to 1:2. Typically, a 6-foot-high or shorter cut slope in weathered granitic rock would not need rock-fall mitigation or protection measures.

The weathered granitic rock is a common geologic feature in western San Diego County and the Existing Alignment Alternative (Proposed Project) does not contain any unique geologic features that would require avoidance or minimization of impacts in order to comply with the County General Plan Conservation and Open Space Element Policy COS-9.2.

Groundwater would not adversely impact the proposed highway project and the highway project is not anticipated to adversely impact the area groundwater. Throughout the project corridor, groundwater can be anticipated at an elevation at or slightly above the nearest river flow elevation. Excavations below the water table would be prone to inundation, and saturated soils would predispose excavations at or below the water table to collapse.

Seismically induced adverse ground responses may occur where loose silts and sands occur in areas with high groundwater, although such responses are less likely in the Existing Alignment Alternative (Preferred Alternative) than in areas near the proposed bridges in the Southern Alignment Alternative. Where these conditions occur, standard and/or specialized engineering design would be required.

The proposed route contains embankments constructed before the route was adopted as a state highway and prior to modern civil and geotechnical engineering embankment construction practices. Often, such embankments contain thick deposits of loose, side-cast or end-dumped materials. These antecedent embankments may require removal or replacement as compacted engineering embankments.

The SR-76 overcrossing of I-15 was constructed in the 1980s and is a two-span, prestressed concrete, continuous, multiple box, beam bridge. This bridge is founded on footings and piles

that extend through alluvial soils into residual materials. The existing bridge would either be replaced with a wider structure or modified and widened.

All recommendations regarding soil conditions, including expansive and unstable soils, would be followed as described in the District Preliminary Geotechnical Report, dated April 2010. In addition, the proposed project would adhere to Caltrans standard design guidelines for unique geologic conditions and soils.

Southern Alignment Alternative

The Southern Alignment Alternative is located on the south side of the San Luis Rey River. For roadways and slopes along the Southern Alignment Alternative, cut slopes may be as high as 6 feet, while fill slopes may be as high as 16 feet. Cut slopes higher than 6 feet in weathered granitic rock developed at slopes of 1.2:1 to 1:2 may require some form of rock-fall protection.

The weathered granitic rock is a common geologic feature in western San Diego County and the Southern Alignment Alternative does not contain any unique geologic features that would require avoidance or minimization of impacts in order to comply with the County General Plan Conservation and Open Space Element Policy COS-9.2.

The proposed route contains embankments constructed before the route was adopted as a state highway and prior to modern civil and geotechnical engineering embankment construction practices. Often, such embankments contain thick deposits of loose, side-cast or end-dumped materials. These antecedent embankments may require removal or replacement as compacted engineering embankments.

Groundwater would not adversely impact the proposed highway project and the highway project is not anticipated to adversely impact the area groundwater. Throughout the project corridor, groundwater can be anticipated at an elevation at or slightly above the nearest river flow elevation. Excavations below the water table would be prone to inundation, and saturated soils would predispose excavations at or below the water table to collapse.

The presence of high groundwater could adversely impact the construction of some elements of the Southern Alignment Alternative. These adverse impacts could include settlement, dewatering, and adverse behaviors from strong ground shaking, and could affect soil bearing capacity. These would require special construction techniques for shallow and deep structure foundations and special consideration of embankment slope ratios. Where such conditions could occur, site-specific specialized engineering could be required.

High groundwater, seasonal high groundwater, and loose or soft soils would require specialized design and construction. Improvements at both proposed San Luis Rey River bridges may be needed to accommodate or mitigate liquefaction-related phenomena like seismically induced settlement, loss of bearing capacity, lateral loading, or lateral spreading.

A second new bridge, the San Luis Rey River Bridge – West, is proposed to cross the San Luis Rey River just east of the SR-76 and South Mission Road intersection. The new abutments and bents would be within the 100-year floodplain and placed in river deposits over granitic rock. Settlement and scour are potential design concerns at this location, and groundwater may impact foundation elements.

A new bridge, the San Luis Rey River Bridge – East, is proposed to cross the San Luis Rey River just west of the SR-76 and Old Highway 395 intersection. The new abutments and bents would be within the 100-year floodplain and placed in river deposits over granitic rock. Settlement and scour are potential design concerns at this location, and groundwater may impact foundation elements.

Based on findings presented in the District Preliminary Geotechnical Report, the presence of loose, saturated soils at proposed new embankment locations in the floodplain may have to be constructed at slope ratios flatter than 2:1 to meet the Caltrans minimum slope stability Factor of Safety Criteria.

All recommendations regarding soil conditions, including expansive and unstable soils, would be followed as described in the District Preliminary Geotechnical Report, dated April 2010. In addition, the proposed project would adhere to Caltrans standard design guidelines for unique geologic conditions and soils.

No Build Alternative

The No Build Alternative would not modify or reconstruct any road or bridge structures within the proposed project corridor. The No Build Alternative would not impact groundwater nor would it cause additional settlement or scour conditions since no new bridges would be constructed. Regular maintenance of the structures, roadway, and drainage facilities would continue.

3.15.4 Avoidance, Minimization, and/or Mitigation Measures

Some slopes associated with the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative may require rock-fall protection, which may include additional setback areas near the traveled way, rock bolts, slope drapes, or rock-fall barriers. If potentially liquefiable materials such as loose saturated sand and silts are encountered, a liquefaction analysis would be performed to evaluate the potential for liquefaction at the site and appropriate design measures would be taken based on the conclusions and recommendations of the report.

Seismic settlement may exert a down drag force on pile foundations and adjacent structures. The magnitude of the settlement should be estimated and foundation mitigation would be considered on a case-by-case basis for the various bridge foundations. In general, adverse conditions would be mitigated on a site-specific basis with a preconstruction technical study and employment of specialized design and engineering practices based on the conditions at each location.

During the project's development, a geotechnical investigation would be conducted to identify conditions that could influence the project's design, construction, and/or highway maintenance. The investigation would provide recommendations to designers on how to protect the traveled-way from rock roll-outs and/or falls.

Section 3.14.4 discusses temporary and permanent BMPs that would be implemented as part of the project. These BMPs include design pollution prevention BMPs, treatment BMPs, and construction site BMPs.

3.16 PALEONTOLOGY

3.16.1 Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. 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], Federal-Aid Highway Act of 1960 [23 USC 305]), and the Omnibus Public Land Management Act of 2009 [16 USC 470aaa]). Under California law, paleontological resources are protected by CEQA.

3.16.2 Affected Environment

A Paleontological Report was prepared for the proposed project dated April 2009.

Paleontological resources (fossils) 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 (rock formations) within which they were originally buried. For the purposes of this report, a paleontological resource can be thought of as including not only the actual fossil remains, but also the collecting localities and the geologic formations containing those localities.

Existing Conditions

Research and published geologic maps indicate that the proposed project area is underlain by geologic units, from oldest to youngest: undivided tonalite (Cretaceous age), granodiorite of Indian Mountain (Cretaceous age), tonalite of Couser Canyon (Cretaceous age), older alluvial floodplain deposits (Pleistocene age), and active alluvial floodplain plus active wash/stream deposits (both of late Holocene age). The project area is largely underlain by unfossiliferous tonalite and granodiorite, as well as recently deposited floodplain and stream channel deposits that are too young to contain fossils.

Pleistocene-age older alluvial deposits are mapped as occurring along the northern extent of the study area. Older alluvial deposits were observed in the central portion of the study area between Flowerwood Lane and Gird Road and in the vicinity of the intersection of SR-76 and I-15. This is the only geologic unit within the study area that has the potential to contain paleontological resources. It is also possible that project excavations could impact previously unrecognized older alluvial sediments that may be along the San Luis Rey River Valley.

The records search failed to report any previously recorded paleontological fossil localities within the project area; however, site records indicate 15 previously recorded fossil collecting localities occur within a five (5)-mile radius of the proposed project. Three of these localities were discovered in sedimentary deposits of the Eocene Santiago Formation, which does not occur within the project area, and 12 were discovered in the correlative older alluvial deposits of late Pleistocene age, which do occur within the project area. Fossils collected from the Pleistocene localities include bones and teeth of ground sloth, capybara, tapir, horse, camel, mammoth, and mastodon. The discovery and recovery of fossils from older alluvial deposits west of the project along the SR-76 roadway, and elsewhere within the San Luis Rey River Valley and at other locations in northern San Diego County, indicate the high potential for fossil occurrences in these older alluvial deposits.

3.16.3 Environmental Consequences

Direct impacts to paleontological resources occur when earthwork activities, such as mass grading and/or trenching operations, cut into the geological deposits (formations) within which fossils are buried. These direct impacts are in the form of physical destruction of fossil remains. Since fossils are the remains of prehistoric animal and plant life, they are considered nonrenewable.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) crosses geologic deposits assigned zero, minor, and major paleontological resource sensitivity. Deposits of zero sensitivity occur along the slopes of the mountains adjacent to the existing SR-76 alignment. Deposits of minor sensitivity occur across the entire floor of the modern San Luis Rey River Valley. Deposits of major sensitivity occur in the vicinity of Flowerwood Lane and at the intersection of Gird Road and SR-76 and in the vicinity of Pala Mesa at the SR-76/I-15 interchange.

Southern Alignment Alternative

The Southern Alignment Alternative crosses geologic deposits assigned zero, minor, and major paleontological resource sensitivity. Deposits of zero sensitivity occur along the slopes of the mountains adjacent to the existing SR-76 alignment. Deposits of minor sensitivity occur across the entire floor of the modern San Luis Rey River Valley. Deposits of major sensitivity occur in the vicinity of Pala Mesa at the SR-76/I-15 interchange.

No Build Alternative

The No Build Alternative would not impact any paleontological resources.

Impact Sensitivity Categories

Impacts to paleontological resources are rated from high sensitivity to zero sensitivity depending upon the resource sensitivity of impacted formations. The specific criteria applied for each sensitivity category are summarized below:

- *High sensitivity*. Impacts to the maximum sensitivity formations – None are present.
- *Moderate sensitivity*. Impacts to major sensitivity formations – Older alluvial deposits anticipated within both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. Adverse impacts could be minimized by implementation of the mitigation measures listed in Section 3.16.4.
- *Low sensitivity*. Impacts to minor sensitivity formations – Holocene alluvial and fluvial deposits anticipated within both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. No adverse impacts are anticipated as a result of excavation in younger (Holocene age) alluvial deposits.
- *Zero sensitivity*. Impacts to zero sensitivity formations – Igneous rocks, artificial fill, or previously disturbed sediments are within both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. No adverse impacts.

3.16.4 Avoidance, Minimization, and/or Mitigation Measures

The project would result in impacts to deposits assigned a major paleontological resource sensitivity (i.e., Pleistocene older alluvial deposits). These deposits occur along the Existing Alignment Alternative (Preferred Alternative) in the vicinity of Flowerwood Lane and at the intersection of Gird Road and SR-76 and in the vicinity of Pala Mesa at the intersection of SR-76 and I-15, as well as the Southern Alignment Alternative, in the vicinity of Pala Mesa at the intersection of SR-76 and I-15. Avoidance of the areas of potential paleontological resources is also an option, as is the burial of sensitive resources under artificial fill materials. However, these options would likely require either unrealistic realignment of the proposed project or extensive borrowing of suitable fill soils from nearby or distant locations. Based on this evaluation, it is recommended that a Paleontological Mitigation Plan (PMP) be formulated to develop measures for reducing the proposed impacts.

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. Elements of the PMP would include:

1. A qualified paleontologist should be at the preconstruction 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 (1) year.)
2. A paleontological monitor should be on-site on a full-time basis during the original cutting of previously undisturbed deposits of moderate sensitivity paleontological resources (Pleistocene older alluvial deposits) 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 should work under the direction of a qualified paleontologist). As grading progresses, the qualified paleontologist and paleontological monitor would make the recommendation to reduce the scope of the monitoring program to an appropriate level if it is determined that the potential for impacts to paleontological resources are lower than anticipated.
3. When fossils are discovered, the paleontologist (or paleontological monitor) should recover them. In most cases this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) would make a request to the Resident Engineer 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 be necessary to set up a screen washing operation on the site.
4. During the monitoring and recovery phases of the PMP, the qualified paleontologist and/or the paleontological monitor should also routinely collect stratigraphic data (e.g., lithology, vertical thickness, lateral extent of strata, nature of upper and lower contacts, and taphonomic character of exposed strata). Collection of such data is critical for providing a stratigraphic context for any recovered fossils.

5. Fossil remains collected during monitoring and salvage should be cleaned (removal of extraneous enclosing sedimentary rock material), sorted (separating fossils of the different species), and cataloged (scientific identification of species, assignment of inventory tracking numbers, and recordation of these numbers in a computerized collection database) as part of the mitigation program.
6. A curation agreement would be prepared as part of the mitigation program and the recovered materials along with copies of all pertinent field notes, photos, and maps, would be deposited in an approved repository for curation.
7. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed and documented, fossils collected, and significance of recovered fossils.

3.17 HAZARDOUS WASTE/MATERIALS

The following section contains information regarding hazards and hazardous materials issues pertaining to the project site, including whether known or potential hazardous substances and/or wastes present a risk to the public or the environment. The information provided below was taken, in part, from the November 2008 Initial Site Assessment.

3.17.1 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 (CWA)
- Clean Air Act (CAA)
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 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, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

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.

3.17.2 Affected Environment

Based on previous investigations along various routes in the San Diego rural area, aerially deposited lead (ADL) is not found in concentrations that are considered hazardous in accordance with Title 22 of the California Code of Regulations along the shoulders of SR-76. In addition, the traffic volumes were not high enough during the years that lead was used as an additive to gasoline to provide a source of ADL that is hazardous on SR-76.

The following issues of potential environmental concern were identified:

- Potential lead and heavy metals impacts associated with the traffic striping and thermoplastic pavement marking and striping on various roadways within and adjacent to the study area,
- Possible lead-based paint and asbestos-containing materials in bridge structures at the SR-76/I-15 overcrossing,
- Potential polychlorinated biphenyl (PCB) contamination of soil adjacent to pole- and pad-mounted transformers located in the study area,
- Potential explosives hazard associated with natural gas transmission lines in the study area,
- Potentially elevated levels of pesticides and/or herbicides in soil on agricultural properties adjacent to the study area,
- Potentially elevated levels of petroleum hydrocarbons and methyl tertiary butyl ether (MTBE) in soil and groundwater from underground gasoline storage tanks, and
- Treated wooden guardrail posts and sign posts used on-site.

In total, 140 listings were associated with properties located between 0.12 and 1.0 mile from the project site. Based on the distances of these facilities from the project site, the direction of groundwater flow, and/or the status of the cases, there is a low likelihood that these facilities present an environmental concern related to hazardous waste to the site at the current time. Seven properties located within or immediately adjacent to the project site were identified. There is a low likelihood that three of these properties present an environmental concern related to hazardous waste to the project site at the current time. The remaining four properties, two of which appear on the Leaking Underground Storage Tank (LUST) list, are discussed below.

<u>County of San Diego Department of Public Works, 2370 SR-76</u>

This property is located on the northwest side of SR-76, southwest of Sweetgrass Lane in the community of Bonsall. This property is a maintenance/operations facility operated by the County of San Diego Department of Public Works. In September 1996, petroleum hydrocarbon contamination was encountered in the vicinity of three active underground storage tanks (USTs) present at the property. The USTs and associated pump island and piping were removed in April 1999. Based on the 2008 hazardous waste study, as well as the distance of the contaminated soil and groundwater from the project site, there is a low likelihood that the release from this property presents an environmental concern to the project.

<u>ExxonMobil Service Station, 4730 SR-76</u>

This property is located on the northeast corner of Old Highway 395 and SR-76 in the community of Fallbrook, and is an active ExxonMobil service station. Petroleum hydrocarbons and MTBE were found in soil and groundwater as a result of leaking USTs and piping migrating from the Exxon/Mobil station toward the project location. Based on the 2008 hazardous waste study, there is a high likelihood that groundwater and possibly soil within the project site in the vicinity of this property have been impacted by the contaminants of concern identified above.

Former Gasoline Service Station and San Luis Rey Maintenance Station

Upon researching aerial photographs, a former gasoline service station was apparent on 1964 and 1977 aerial photographs at the northwest corner of SR-76 and the former Highway 395 intersection. The presence of USTs is not indicated. However, there was an oil pump house with underground piping. Potential impacts are considered low. In addition, a former maintenance station appeared to have been located beneath the existing northbound I-15 main traveled way north of SR-76. Due to the location and limited information, the potential for adverse environmental impacts is low.

3.17.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

Both build alternatives are likely to encounter groundwater and possibly soil contamination at a depth of at least 6 feet near the existing ExxonMobil service station located on the northeast corner of Old Highway 395 and SR-76 (Figure 3.17-1a). Contamination in groundwater is migrating from the existing station to the southeast in the direction of the project site. The lateral and vertical extent of the contamination southeast of the station has not been determined to date. Contamination may have migrated across the existing SR-76 onto the property that has been proposed for construction of a future expansion of the Park and Ride facility. Portions of the proposed highway construction include traffic signals, which require signal pole placement and footings for the signal poles would encounter groundwater.

Both build alternatives include demolition of portions or all of the existing SR-76 bridge structure overcrossing I-15, which may contain asbestos and lead-based paint (Figure 3.17-1a). Both build alternatives would involve disturbance of traffic striping and thermoplastic pavement markings, and striping within the boundaries of the project site. For the Southern Alignment Alternative, this disturbance would be limited to the southwestern and northeastern portions of the project site; with the Existing Alignment Alternative (Preferred Alternative), the disturbance would involve the entire length of the project site (Figure 3.17-1b).

It is unlikely that electrical transformers within either build alternative contain PCBs. The dielectric fluid associated with the transformers does not present an environmental concern unless it is released from the transformer and comes into contact with the surrounding ground surface.

Both build alternatives involve passing through parcels associated with agricultural uses that possibly have involved application of pesticides to surface soils (Figure 3.17-1a).

Figures 3.17-1a and 3.17-1b show the locations of the areas of potential environmental concern in relation to the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative.

No Build Alternative

The No Build Alternative would not involve encountering the potential environmental issues discussed above, as no ground-disturbing activities would occur.

3.17.4 Avoidance, Minimization, and/or Mitigation Measures

The following minimization and/or mitigation measures would be performed on both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative to reduce the potential impacts from potential environmental issues to the fullest extent practicable.

- A limited hazardous waste study would be performed for potentially elevated levels of petroleum hydrocarbon and MTBE contamination within the limits of proposed construction, and/or right-of-way acquisition, adjacent to the existing ExxonMobil gas station. If contaminated soils and/or groundwater are encountered within the areas proposed for construction, the soils and/or groundwater would require chemical characterization and subsequent disposal at an appropriate landfill or reuse as fill material prior to/during construction in accordance with federal, state, and local regulations. If dewatering is performed in this area, an NPDES permit would be required for discharge of water (Order No. R9-2008-0002, NPDES No. CAG919002).
- Asbestos surveys and lead-based paint surveys would be conducted by a certified consultant prior to any modification to, or demolition of, the existing SR-76 bridge structure overcrossing I-15. If asbestos and/or lead-based paint are encountered on any bridge components, such materials shall be properly handled and removed using a qualified abatement company, contained, labeled, and disposed of off-site at a solid waste disposal facility designated to accept lead and asbestos waste.
- To avoid impacts from pavement striping during construction, it is recommended that testing of paint striping and/or markings for the presence of lead and other heavy metals be performed prior to construction. Any paint stripings and/or markings found to contain heavy metals would be removed and disposed of in accordance with Caltrans Standard Special Provisions.
- Based on correspondence with an SDG&E representative, it is unlikely that electrical transformers within the project area contain PCBs. However, should leaks from electrical transformers be observed within the project area, the procedures outlined in *Caltrans Hazards Procedures for Construction* shall be followed.
- A preliminary investigation and screening would be performed for potentially elevated levels of pesticides and/or herbicides within the areas of right-of-way acquisition on parcels 125-080-18-00, 125-080-19-00, and 125-090-36-00 to the full depth of planned construction activities prior to demolition/improvement activities involving soil disturbance. If potentially elevated levels of pesticides and/or herbicides are found within the areas of right-of-way acquisition, chemical characterization of the soils shall be performed and the soils shall be disposed of at an appropriate landfill or reused as fill material prior to/during construction in accordance with federal, state, and local regulations.
- The potential exists for unknown hazardous contamination to be revealed during project construction. For any previously unknown hazardous waste/material encountered during construction, the procedures outlined in *Caltrans Hazards Procedures for Construction* shall be followed.
- Gas utilities are known within the project location and shall be addressed prior to construction.

- When treated wood is removed and not reused on-site, it must be disposed of at a composite-lined solid waste landfill facility permitted to accept such waste.

A site-specific Health and Safety Plan and Excavation/Remediation Plan are required for the above-mentioned hazardous waste issues.

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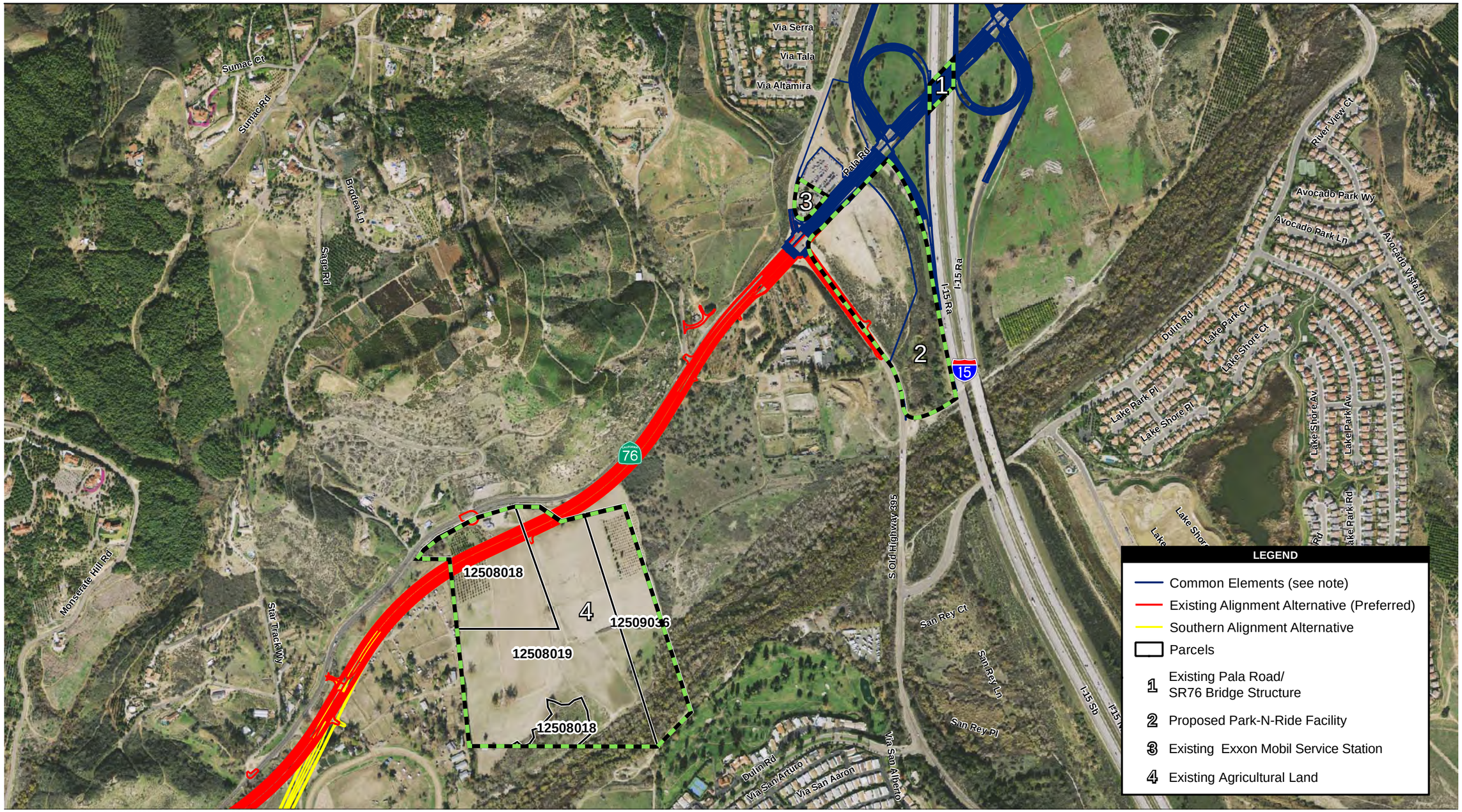


Source: DigitalGlobe 2008; SanGIS 2009; Dokken Engineering 2010

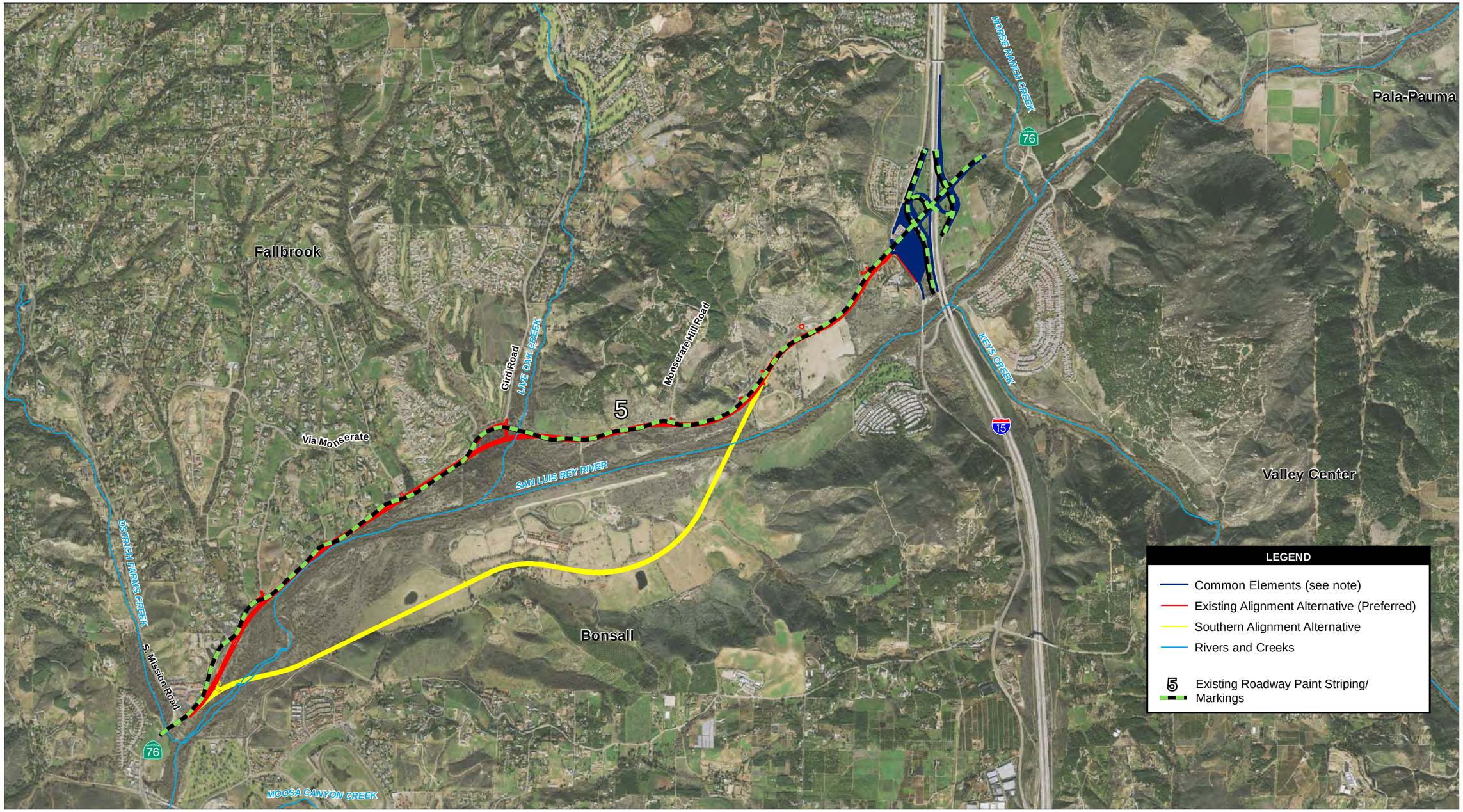
700 350 0 700 Feet

Scale: 1 = 8,400; 1 inch = 700 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.17-1a
Areas of Potential Environmental Concern

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_17_1a_Environmental Concern - base.mxd, 10/5/2011, augellop



Source: SanGIS 2009; Dokken Engineering 2010; DigitalGlobe 2008

2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.17-1b
Areas of Potential Environmental Concern

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_17_1b_Environmental Concern - base.mxd, 10/5/2011, augellop

3.18 AIR QUALITY

3.18.1 Regulatory Setting

The federal Clean Air Act (CAA), as amended in 1990, is the federal law that governs air quality. The California Clean Air Act of 1988 is its companion state law. These laws, and related regulations by USEPA and California Air Resources Board (ARB), 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). NAAQS and state ambient air quality standards have been established for six transportation-related 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, broken down for regulatory purposes into particles of 10 micrometers or smaller—PM_{10}—and particles of 2.5 micrometers and smaller—$PM_{2.5}$), lead (Pb), and sulfur dioxide (SO_2). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H_2S), and vinyl chloride. The NAAQS and state standards are set at a level that protects public health with a margin of safety and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics). Some criteria pollutants are also air toxics or may include certain air toxics within their general definition.

Federal and California air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA and CEQA. In addition to this type of environmental analysis, a parallel “conformity” requirement under the federal CAA also applies.

CAA Section 176(c) prohibits the USDOT and other federal agencies from funding, authorizing, or approving plans, programs, or projects that are not first found to conform to the State Implementation Plan (SIP) for achieving the goals of CAA requirements related to the NAAQS. “Transportation Conformity” takes place on two levels: the regional, or planning and programming, level; and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and maintenance (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. USEPA regulations at 40 CFR 93 govern the conformity process.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the standards set for CO, NO_2, O_3, particulate matter (PM_{10} and $PM_{2.5}$), and in some areas SO_2. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO_2, and also has a nonattainment area for lead. However, lead is not currently required by the CAA to be covered in transportation conformity analysis. Regional conformity is based on Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all of the transportation projects planned for a region over a period of at least 20 years for the RTP and 4 years for the FTIP. RTP and FTIP conformity is based on use of travel demand and air quality models to determine whether implementation of those projects would conform to emission budgets or other tests showing that requirements of the CAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO, which is SANDAG in the San Diego region), FHWA, and Federal Transit Administration (FTA) make determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the CAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and open-to-traffic schedule of a proposed transportation project are the same as described in the RTP and FTIP, 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 particulate matter (PM_{10} or $PM_{2.5}$). A region is nonattainment if one or more of the monitoring stations in the region measures violation of the relevant standard, and USEPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by USEPA, and are then called maintenance areas. Hot spot analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a hot spot analysis. In general, projects must not cause the hot spot-related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

3.18.2 Affected Environment

Meteorology and Climate

This section is based on the July 2010 Caltrans Air Quality Analysis, a separate technical study prepared for this project; those conclusions are summarized below. Also, the Supplemental Park and Ride Traffic Generation Study is attached under separate cover to the Traffic Report. The FHWA Air Quality Conformity Determination is included in the document as Appendix J.

The proposed 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 climate 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.

In San Diego County, the months of heaviest precipitation are November through April, averaging about 9 to 14 inches annually. The mean temperature is 62 degrees Fahrenheit (°F) and the mean maximum and mean minimum temperatures are 76.0 and 48.1°F, respectively (WRCC 2006).

The Pacific High also influences the wind patterns of California. The predominant wind directions are westerly and west-southwesterly during all four seasons, and the average annual wind speed is 5.6 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. Subsistence 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. 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 Air Quality Conformity

The project site is located in the SDAB, which currently meets the federal standards for all criteria pollutants except O_3 (8-hour), and state standards for all criteria pollutants except O_3 (8-hour), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) (Table 3.18-1).

Table 3.18-1. Air Quality Designations for San Diego Air Basin

Pollutant	SDAB Attainment Status	
	Federal	State
Ozone – 8-hour	Nonattainment – Basic Subpart 1	Nonattainment
Carbon Monoxide	Attainment/Maintenance	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment

On April 15, 2004, USEPA issued the initial designations for the 8-hour O_3 standard, and the SDAB is classified as a federal nonattainment area for the 8-hour O_3 standard under Subpart 1 – Basic Nonattainment. Basic is the least severe of the six degrees of O_3 nonattainment. The boundaries of the 8-hour O_3 nonattainment area are the boundaries of San Diego County. However, the San Diego County Air Pollution Control District (APCD) submitted an air quality plan to USEPA in 2007; the plan demonstrated how the 8-hour O_3 standard would be attained by 2009. The SDAB is currently classified as a state "serious" O_3 nonattainment area and a state nonattainment area for $PM_{2.5}$ and PM_{10}.

In 2008, USEPA strengthened the air quality standards for ground-level O_3. As of September 16, 2009, USEPA announced that it would reconsider its 2008 decision setting national standards for ground-level O_3. Additionally, USEPA requested states to recommend designation of areas for the 2008 ground-level O_3 standards. In a March 2009 letter to USEPA, ARB recommended designating 21 areas as nonattainment for the revised O_3 standard of 0.075 parts per million. This recommendation included all of San Diego County, where data revealed that O_3 concentrations exceeded the standard at several sites. USEPA delayed action on the area designation recommendations pending reconsideration of the 2008 Federal 8-Hour Ozone Standard. A decision on a new standard is expected by late Summer 2011 (ARB 2011).

The SDAB is a CO attainment/maintenance area, following a 1998 redesignation as a CO attainment area.

The proposed project is included in SANDAG's 2030 RTP and 2010 RTIP. The project is identified in Appendix A of the 2030 RTP as SR-76 South Mission Road to I-15, with the following description: From South Mission Road to I-15 – widen from 2 to 4 lanes. A conformity redetermination for the 2030 RTP was made by USDOT on November 17, 2008. The project is identified in the 2010 RTIP on page 34, as MPO ID: CAL29B; SANDAG ID: 1207606; and described in the RTIP as SR-76: From Mission Rd. to I-15 – In and near Oceanside from Mission Rd. to I-15, widen from 2 to 4 lanes. The project capacity category is "CI" (Capacity Increasing).

SANDAG, as the MPO, along with USDOT, must make a determination that the 2010 RTIP and 2030 RTP conform to the applicable SIP. Conformity to the SIP means that transportation activities would not create new air quality violations, worsen existing violations, or delay the attainment of the NAAQS. Federal regulations also require SANDAG to conduct an air quality

conformity analysis of all regionally significant projects that increase the transportation system capacity. All regionally significant capacity-increasing transportation projects, regardless of funding sources, must be included in the RTIP. The 2010 RTIP was adopted by the SANDAG Board on September 24, 2010. On December 14, 2010, FHWA made a finding of conformity for the 2010 RTIP and a conformity redetermination for the 2030 RTP. The design concept and scope of the proposed project are consistent with the project description in the 2030 RTP and the 2050 RTP recently approved by the SANDAG Board on October 28, 2011, the 2010 RTIP, and the assumptions in SANDAG's regional emissions analysis.

Project-Level Air Quality Conformity

Table 3.18-2 lists the applicable national and California standard for each air pollutant.

Ambient air pollutant concentrations in the SDAB are measured at 10 air quality monitoring stations operated by APCD. The APCD air quality monitoring station that represents the project area, climate, and topography in the SDAB is the Escondido – East Valley Parkway monitoring station, located at 600 East Valley Parkway, Escondido, approximately 17.6 miles south of the project area. The station monitors CO, NO_2, O_3, PM_{10}, and $PM_{2.5}$. Table 3.18-3 summarizes the excesses of standards and the highest pollutant levels recorded at this station for the years 2007 through 2009. It indicates that, in 2007, the project area exceeded the standards for O_3, PM_{10}, and $PM_{2.5}$. FHWA found that the Conformity Determination for the SR-76 South Mission Road to I-15 Highway Improvement Project conforms to the SIP in accordance with 40 CFR Part 93 on April 25, 2011 (Appendix J).

3.18.3 Environmental Consequences

The following is a summary of the project impact analysis processes, assumptions, results, and conclusions per the Caltrans Air Quality Analysis. It includes an impact summary for one "maintenance" pollutant (CO), two "nonattainment" pollutants (PM_{10}, and $PM_{2.5}$), Mobile Source Air Toxics (MSATs), and temporary construction impacts.

Naturally Occurring Asbestos (NOA)-bearing Serpentine:

Serpentine is a mineral commonly found in seismically active regions of California, usually in association with ultramafic rocks and along associated faults. Certain types of serpentine occur naturally in a fibrous form known generically as asbestos. Asbestos is a known carcinogen and inhalation of asbestos may result in the development of lung cancer or mesothelioma. ARB has regulated the amount of asbestos used in surfacing applications, since 1990. In 1998, new concerns were raised about health hazards from activities that disturb asbestos-bearing rocks and soil. In response, ARB revised their asbestos limit for rushed serpentines and ultramafic rock in surfacing applications from 5 percent to less than 0.25 percent and adopted a new rule requiring best practices dust control measures for activities that disturb rock and soil containing NOA.

According to the report *A General Location Guide for Ultramafic Rocks in California – Area Likely to Contain Naturally Occurring Asbestos*, the coastal portion of San Diego County NOA is not typically found in the geological formations present on the proposed project site. Thus hazardous exposure to asbestos-containing serpentine materials would not be a concern with the proposed project.

Table 3.18-2. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	National[a]		California[b]
		Primary[c, d]	Secondary[c, e]	Concentration[c]
Ozone	1 hour	—	Same as primary standard	0.09 ppm (180 µg/m^3)
	8 hour	0.075 ppm (147 µg/m^3)		0.070 ppm (137 µg/m^3)
Respirable particulate matter	24 hour	150 µg/m^3	Same as primary standard	50 µg/m^3
	Annual arithmetic mean	—		20 µg/m^3
Fine particulate matter	24 hour	35 µg/m^3	Same as primary standard	No separate state standard
	Annual arithmetic mean	15 µg/m^3		12 µg/m^3
Carbon monoxide	8 hour	9 ppm (10 mg/m^3)	None	9.0 ppm (10 mg/m^3)
	1 hour	35 ppm (40 mg/m^3)		20 ppm (23 mg/m^3)
	8 hour (Lake Tahoe)	—	—	6 ppm (7 mg/m^3)
Nitrogen dioxide	Annual arithmetic mean	0.053 ppm (100 µg/m^3)	Same as primary standard	0.030 ppm (57 µg/m^3)
	1 hour	0.100 ppm	None	0.18 ppm (339 µg/m^3)
Sulfur dioxide	Annual arithmetic mean	0.030 ppm (80 µg/m^3)	—	—
	24 hour	0.14 ppm (365 µg/m^3)	—	0.04 ppm (105 µg/m^3)
	3 hour	—	0.5 ppm (1,300 µg/m^3)	—
	1 hour	—	—	0.25 ppm (655 µg/m^3)
Lead[f]	30-day average	—	—	1.5 µg/m^3
	Calendar quarter	1.5 µg/m^3	Same as primary standard	—
	Rolling 3-month average[g]	0.15 µg/m^3		—
Visibility-reducing particles	8 hour	No national standards		Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more (0.07 to 30 miles for Lake Tahoe) because of particles when the relative humidity is less than 70 percent. Method: Beta attenuation and transmittance through filter tape.
Sulfates	24 hour			25 µg/m^3
Hydrogen sulfide	1 hour			0.03 ppm (42 µg/m^3)
Vinyl chloride[f]	24 hour			0.01 ppm (26 µg/m^3)

Notes: mg/m^3 = milligrams per cubic meter; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; µg/m^3 = micrograms per cubic meter

[a] National standards (other than those for ozone and 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 PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, 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 U.S. Environmental Protection Agency for further clarification and current federal policies.

[b] 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.

[c] 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 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] The California Air Resources Board 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.

[g] National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: ARB 2010

Table 3.18-3. Ambient Air Quality Summary – Escondido, East Valley Parkway

Pollutant Standards	2007	2008	2009
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	3.19	2.81	3.24
Number of Days Standard Exceeded			
NAAQS 8-hour (≥9 ppm)	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration (ppm)	0.072	0.081	0.073
Annual Average (ppm)	0.016	0.018	0.016
Number of Days Standard Exceeded			
CAAQS 1-hour	0	0	0
Ozone (O_3)			
Maximum 1-hour concentration (ppm)	0.194	0.116	0.093
Maximum 8-hour concentration (ppm)	0.077	0.098	0.080
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	0	9	0
CAAQS 8-hour (>0.070 ppm)	5	23	9
NAAQS 8-hour (>0.08 ppm)	3	13	1
Particulate Matter (PM_{10})[a]			
National maximum 24-hour concentration (μg/m^3)	57.0[b]	82.0	73.0
National second highest 24-hour concentration (μg/m^3)	48.0	45.0	47.0
State maximum 24-hour concentration (μg/m^3)	57.0	84.0	74.0
State second highest 24-hour concentration (μg/m^3)	49.0	44.0	47.0
National annual average concentration (μg/m^3)	26.7[c]	24.6	*
State[d] annual average concentration (μg/m^3)	26.8	*	24.6
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 μg/m^3)[e]	0	0	0
CAAQS 24-hour (>50 μg/m^3)[e]	1	1	1
Particulate Matter ($PM_{2.5}$)			
National maximum 24-hour concentration (μg/m^3)	52.7[b]	31.3	34.1
National second highest 24-hour concentration (μg/m^3)	48.5	30.6	24.5
State maximum 24-hour concentration (μg/m^3)	59.4	44.0	78.4
State second highest 24-hour concentration (μg/m^3)	48.5	44.0	60.6
National annual average concentration (μg/m^3)	13.3	*	10.5
State annual average concentration (μg/m^3)	13.3[f]	12.4[f]	*
Number of Days Standard Exceeded			
NAAQS 24-hour[e,g] (>35 μg/m^3)	9.4	*	0

* Data Unavailable
[a] Measurements usually collected every 6 days.
[b] PM_{10} and $PM_{2.5}$ data for October 21-27, 2007 was designated as "exceptional event" data due to wildfires, and is not included in this table.
[c] National annual average PM_{10} standard revoked in December 2006.
[d] State annual average PM_{10} standard of 20 μg/m^3 exceeded in 2007 and 2009.
[e] Exceedance days are projected based on measurements once every 6 days.
[f] State annual average $PM_{2.5}$ standard of 12 μg/m^3 exceeded in 2007.
[g] National $PM_{2.5}$ standard reduced from 65 μg/m^3 to 35 μg/m^3 in December 2006.
Source: ARB 2010

Carbon Monoxide (CO)

The Transportation Conformity Rules (Conformity Rules) state the following:

> 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 Conformity Rules applies to the proposed project because the SDAB is classified as a federal CO maintenance area. The air quality analyses of the RTP and RTIP do not include the analyses of local CO impacts, as 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 the Transportation Project-Level Carbon Monoxide Protocol (Protocol). The Protocol provides a methodology for determining the level of analysis, if any, required on a project. The guidelines comply with the CAA, federal and state conformity rules, NEPA, and CEQA.

On January 5, 2007, FHWA approved EMFAC 2007 for use in the State of California. As of July 31, 2007, Caltrans, through a notice on its website, has required the use of EMFAC 2007, or CT-EMFAC version 2.6, for use in all CO Hot Spot Analysis in new projects that require its approval. CT-EMFAC is an interpretation of ARB's EMFAC model that simplifies the process of getting composite emission factors. EMFAC 2007 is the latest emissions model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects ARB's current understanding of how vehicles travel and how much they pollute. The EMFAC 2007 model is used to show how California motor vehicle emissions have changed over time and are projected to change in the future. Use of the latest version is encouraged, particularly in the San Diego and San Joaquin Valley regions.

The Protocol states that the determination of project-level CO impacts should be carried out in accordance with the Local CO Analysis flow charts, as shown in detail in the Caltrans Air Quality Analysis.

The SDAB was redesignated as a CO attainment area subsequent to the passage of the 1990 CAA amendments. Continued attainment has been verified with 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 do the following:

- Increase the percentage of vehicles operating in cold start mode (2 percent or more),
- Significantly increase traffic volumes (5 percent or more), or
- Worsen traffic flow.

These criteria were evaluated when comparing the build and no build scenarios. The proposed project does not involve development of housing, employment centers, or other attractions, and thus would not itself generate traffic volumes. The project would accommodate increased traffic volumes on this segment of SR-76 by providing increased efficiency via expanded capacity (roadway widening), and providing parking capacity and rideshare/mass transit opportunities at the Park and Ride facility. However, the percent increase in project traffic would be less than substantial. The proposed Park and Ride facility would contribute 143 outbound vehicles

operating in the cold start mode on weekdays during the peak PM period (see the Supplemental Park and Ride Traffic Generation Study). When considered with the project volumes as a whole, the percent increase would be less than substantial. The project would increase roadway capacity, increase traffic speed, and improve intersections. The project traffic report identified existing and future (with project) LOS conditions for signalized intersections for the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative.

For the Existing Alignment Alternative (Preferred Alternative), under existing (2005) conditions, all signalized intersections would operate at LOS D or better, except for the intersection of I-15 northbound during peak PM hours (LOS E). In opening year 2015, under No Build conditions, all signalized intersections would operate at LOS D or better, except for the spread diamond interchange intersection with I-15 northbound under peak PM conditions (LOS E). In opening year 2015, under build conditions, all signalized intersections would operate at LOS D or better, except the intersection with I-15 northbound under peak PM conditions, which would improve to LOS E. The Existing Alignment Alternative (Preferred Alternative) would not worsen traffic flow, defined for intersections as increasing average delay at signalized intersections operating at LOS E or F. Therefore, no further localized CO impact analysis is required for the Existing Alignment Alternative (Preferred Alternative) according to the Protocol.

For the Southern Alignment Alternative, LOS conditions were similar under the Existing Alignment Alternative (Preferred Alternative); that is, all signalized intersections would operate at LOS D or better, except for the I-15 northbound ramp intersection, which would operate at LOS E during the peak PM period. In opening year 2015 under No Build conditions, all signalized intersections would operate at LOS D or better, except for the intersection with South Mission Road during peak PM conditions, which would operate at LOS E, and the spread diamond interchange intersection with I-15 northbound under peak PM conditions (LOS F). In opening year 2015 under build conditions, all signalized intersections would operate at LOS D or better, thereby improving the intersection LOS in 2015 with the project. Therefore, no further localized CO impact analysis is required for the Southern Alignment Alternative according to the Protocol.

According to the Protocol, the project is considered satisfactory and no further CO analysis is required. Therefore, no localized CO impacts would occur.

Particulate Matter (PM_{10} and $PM_{2.5}$)

On March 10, 2006, USEPA published a final rule that established 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, USEPA 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 is assessed using the procedure outlined in the PM Guidance.

The PM Guidance document describes a qualitative hot spot analysis method that does not involve dispersion modeling. This qualitative $PM_{2.5}$ and PM_{10} hot spot analysis method involves a more streamlined review of local factors such as local monitoring data near a proposed project location. The $PM_{2.5}$ and PM_{10} hot spot analysis method in the March 2006 PM Guidance

involves two steps: determining whether a project is a "project of concern" and, if it is, preparing a qualitative (emission analysis only) but more detailed analysis of the project.

The PM Guidance defines the following types of projects as projects of air quality concern:

- New or expanded highway project that has a substantial number of or substantial increase in diesel vehicles;
- Projects affecting intersections that are LOS D, E, or F with a substantial number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a substantial number of diesel vehicles related to the project;
- New bus or rail terminals, or transfer points, that have a substantial number of diesel vehicles congregating at a single location;
- Expanded bus or rail terminals, or transfer points, that substantially increase the number of diesel vehicles congregating at a single location; and
- Projects in or affecting locations, areas, or categories of sites that are identified in the $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

A substantial volume for a new highway or expressway is defined as an annual average daily traffic (AADT) volume of 125,000 or more, and a substantial number of diesel vehicles is defined as 8 percent or more of the total AADT, or more than 10,000 truck AADT. A substantial increase in diesel truck traffic is normally considered to be approximately 10 percent.

The proposed improvements to the SR-76 corridor would maintain or improve projected future traffic operations. The design year (2030) AADT volume with the project is 48,050 vehicles, which is less than the volume significance criteria of 125,000 AADT. The existing diesel-fueled truck percentage within the project limits is approximately 14 percent of the AADT. The proposed project would result in a minor increase (less than 1 percent) in the ratio of trucks to the AADT volumes due to the addition of trucks from the Park and Ride facility, and the estimated horizon year (2030) truck AADT would remain at approximately 14 percent.

In addition to the widening of SR-76, the proposed project includes other associated improvements to the northern Park and Ride facility adjacent to SR-76 between Old Highway 395 and I-15. The Park and Ride facility would not generate vehicle trips, but rather would provide a facility for carpooling of existing traffic on SR-76 and I-15, thereby reducing vehicle trips on area roadways.

The proposed project would result in a minor increase (less than 1 percent) in the ratio of trucks to the AADT volumes due to the addition of trucks from the Park and Ride facility, and the estimated horizon year (2030) truck AADT would remain at approximately 14 percent.

As indicated in the PM Guidance, pursuant to 40 CFR 93.123(b)(i) and (ii), any new or expanded highway project that does not involve a substantial (greater than 8 percent) number or increase in the number of diesel vehicles is a project that is not of air quality concern and, consequently, does not require a $PM_{2.5}$ and PM_{10} hot spot analysis. Therefore, $PM_{2.5}$ and PM_{10} hot spot analyses are not required and were not undertaken in this study.

In addition, PM_{10} and $PM_{2.5}$ concentrations in the SDAB show a general downward trend. Table 3.18-4 shows the PM_{10} and $PM_{2.5}$ concentrations observed at the Escondido East Valley Parkway Monitoring Station from 2007 to 2009 in comparison with federal and state standards. As shown in Table 3.18-4, $PM_{2.5}$ concentrations observed at the Escondido Station decreased or remained the same from 2007 to 2009, except for PM_{10}, averaged over 24 hours. Table 3.18-4 excludes PM data from October 21 through October 27, 2007, which were designated as "exceptional event" data due to wildfires, and therefore do not include the highest PM concentrations shown in Table 3.18-3.

Table 3.18-4. PM_{10} and $PM_{2.5}$ Trends at the Escondido East Valley Parkway Monitoring Station

Pollutant	Averaging Time	Federal Primary Standards	California Air Quality Standards	Maximum Concentrations (µg/m^3)		
				2007	2008	2009
PM_{10}	24 hours	150 µg/m^3	50 µg/m^3	57.0	82.0	73.0
	Annual	Revoked	20 µg/m^3	26.7	24.6	*
$PM_{2.5}$	24 hours	35 µg/m^3	none	52.7	31.3	34.1
	Annual	15 µg/m^3	12 µg/m^3	13.3	*	10.5

*Data unavailable
PM data for October 21–27, 2007, was designated as "exceptional event" data due to wildfires and are not included in this table.
µg/m^3 = micrograms per cubic meter
Source: ARB 2010

Mobile Source Air Toxics (MSATs)

The following discussion is based on the FHWA Memorandum, Subject: INFORMATION: Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, dated September 30, 2009 (FHWA 2009), which provides an update to the Interim Guidance on Air Toxic Analysis in NEPA Documents, dated February 3, 2006 (FHWA 2006b). The purpose of the guidance is to advise when and how to analyze MSATs in the NEPA process for highways. This guidance is interim, because MSAT science is still evolving. As the science progresses, FHWA will update the guidance.

USEPA is the lead federal agency for administering the CAA and has certain responsibilities regarding the health effects of MSATs. USEPA regulates 188 air toxics, known as hazardous air pollutants, under the CAA. USEPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, Page 8430, February 20, 2007) and 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, USEPA identified seven compounds with substantial contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/nata1999/). These are 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 USEPA rules.

The 2007 USEPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using

USEPA's MOBILE6.2 model, even if vehicle activity (vehicle miles traveled, VMT) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050.

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA. Nonetheless, air toxics concerns continue to be raised on highway projects during the NEPA process. Even as the science emerges, FHWA is expected by the public and other agencies to address MSAT impacts in environmental documents. FHWA, USEPA, the Health Effects Institute (HEI), and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions and associated with highway projects. FHWA will continue to monitor the developing research in this emerging field.

Incomplete or Unavailable Information for Project Specific MSAT Impact Analysis

This air quality analysis includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with implementation of the proposed project. Due to these limitations, the following discussion is included in accordance with 40 CFR Section 1502.22(b) regarding incomplete or unavailable information:

Information That is Unavailable or Incomplete

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 project.

USEPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the CAA and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSATs. USEPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the (IRIS, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (USEPA, http://www.epa.gov/ncea/iris/index.
html). Each report contains assessments of noncancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSATs, including the HEI. Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, http://pubs.healtheffects.org/view.php?id=282) or

in the future as vehicle emissions substantially decrease (HEI, http://pubs.healtheffects.org/view.php?id=306).

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. These difficulties are magnified for lifetime (i.e., 70 years) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the USEPA's MOBILE6.2 model, the California Environmental Protection Agency's (CalEPA) Emfac2007 model, and the USEPA's DraftMOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 substantially underestimates diesel PM emissions and substantially overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of USEPA's guideline CAL3QHC model was conducted in an NCHRP study (http://www.epa.gov/scram001/dispersion_alt.htm#hyroad), which documents poor model performance at 10 sites across the country—three where intensive monitoring was conducted and seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with NAAQS for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (http://pubs.healtheffects.org/view.php?id=282). 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. USEPA (USEPA 2011) and the HEI (FHWA 2006c) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by USEPA as provided by the CAA to determine whether more stringent controls are required to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires USEPA 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. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld USEPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

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.

Evaluation of Project MSAT Potential

This document provides a qualitative assessment of MSAT emissions relative to the various alternatives and has acknowledged that all of the project alternatives may result in increased exposure to MSAT emissions in certain locations. The amount of MSATs emitted would be proportional to the VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT anticipated for the proposed alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the build alternatives along the highway corridor, along with a corresponding decrease in MSAT emissions along parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds. According to USEPA'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 decrease would offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

The proposed project would widen the project segment of SR-76 and thereby add capacity to this roadway segment. While additional capacity would be facilitated, the widened segment would provide an estimated maximum ADT of less than 20,000 (LL&G 2009a), which would be substantially less than the FHWA threshold value of 140,000 AADT, the minimum volume for higher potential MSAT effects (Quantitative Analysis) (FHWA 2006c). Therefore, the proposed project would not be included in Category (3).

Therefore, by default, the proposed project would be included in Category (2) and would have a low potential for MSAT effects (Qualitative Analysis). This assessment is based on FHWA guidance that projects that do not meet the criteria for Category (1) or Category (3) should be included in Category (2) (FHWA 2006c).

VMT is proportional to the increase in ADT and segment length. Relative emissions could be assumed at spot locations as necessary using the traffic data.

VMT alone would not produce accurate emissions impacts, a quantitative EMFAC model would need to be generated using VMT and speed distribution for accurate comparison purposes.

Regardless of the alternative chosen, emissions would likely be lower than present levels in the design year as a result of USEPA'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; however, the magnitude of the USEPA-projected reductions 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.

Temporary Impacts

The principal criteria pollutants emitted during construction 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 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.

A secondary source of pollutants during construction would be the engine exhaust from construction equipment. The principal pollutants of concern would be nitrogen oxide (NO_X) and volatile organic compound (VOC) emissions that would contribute to the formation of O_3, which is a regional nonattainment pollutant. VOCs are compounds that have a high vapor pressure and low water solubility. It is recommended that specific measures to control dust and particulates be incorporated into project specifications. These measures are identified in Section 3.18.4.

Climate Change

Climate change is analyzed in Chapter 4. Neither USEPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level greenhouse gas (GHG) 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. Addressing climate change mitigation and adaptation in the planning process would facilitate decision-making and improve efficiency at the program level, and would 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 compared to the national level, the issue is addressed in the CEQA chapter (Chapter 4) of this environmental document and may be used to inform the NEPA decision. 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 traveled.

[1] "Fugitive" is a term used in air quality analysis to denote emission sources that are not confined to stacks, vents, or similar paths.

3.18.4 Avoidance, Minimization, and/or Mitigation Measures

It is recommended that the following measures be incorporated into the project to minimize the emission of fugitive dust, PM_{10}, and $PM_{2.5}$:

- Comply with Caltrans Standard Specifications (2006) Section 10: Dust Control or with Caltrans Standard Specifications (2010) Section 14-9.03: Dust Control.
- 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 dirt piles if not removed within 2 days.
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
- Minimize unnecessary vehicular and machinery activities.
- Sweep streets where sediment is tracked from the jobsite onto paved roads and immediately after soil-disturbing activities occur or off-site tracking is observed.
- Revegetate disturbed land, including vehicular paths created during construction, to avoid future off-road vehicular activities.

It is recommended that the following measure be incorporated into the project to minimize exposure to diesel PM emissions:

- 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.

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3.19 NOISE

3.19.1 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 would have a noise impact. If a proposed project is determined to have a substantial 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 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

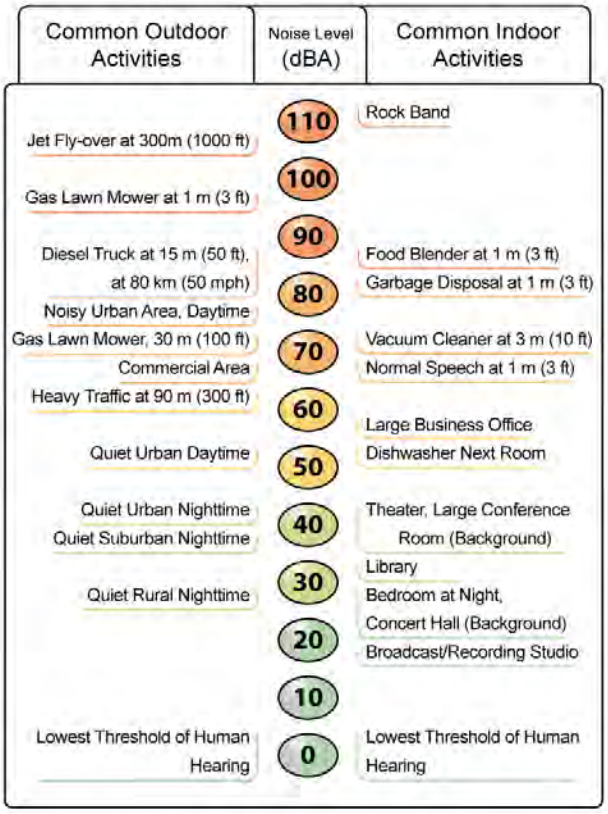
For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the Federal Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (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). Table 3.19-1 lists the NAC for use in the NEPA 23 CFR 772 analysis.

Table 3.19-1. Activity Categories and Noise Abatement Criteria

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	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Table 3.19-2 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 3.19-2. Noise Levels for Common Activities



In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects,* August 2006, a noise impact occurs when the future noise level with the project results in a substantial increase in 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 1 dBA of the NAC.

If it is determined that the project would 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 into the project.

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 5-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.

3.19.2 Affected Environment

As identified in the October 2009 Noise Study Report that was prepared for this project, the land uses adjacent to the project corridor are residential, commercial, and undeveloped areas.

Noise measurement sites are locations where noise measurements are taken to determine existing noise levels and to verify or calibrate computer noise models. These sites are chosen as being representative of similar sensitive sites in the area. Locations that are expected to receive the greatest impact are generally chosen. Noise measurements were mainly conducted in frequent outdoor human-use areas. The sensitive receptors for the Existing Alignment Alternative (Preferred Alternative) are listed within the "Location" columns in Table 3.19-3 and within the "Location" column in Table 3.19-4 for the Southern Alignment Alternative; those shown in bold are those receptors where the noise increase due to the proposed build alternatives approaches or exceeds the NAC. The sensitive receptors are depicted on Project Features Maps (Figures 2.1-2a through 2.1-2d, 2.1-2f, 2.1-3a through 2.1-3c, 2.1-3f, and 2.1-3g).

Table 3.19-3. Sensitive Receptors and Noise Impact – Existing Alignment Alternative (Preferred Alternative)

Receiver ID	Location or Address	Existing Noise Level dBA L_{eq}	Project Build without Barrier dBA L_{eq}
R-1	5256 South Mission Road (Daniel's Apple Market)	66	70
R-2	5256 South Mission Road (Jack in the Box)	65	70
R-3	2370 SR-76 – County Department of Public Work Facility	61	67
R-4	2370 SR-76 – County Department of Public Work Facility	59	65
R-5	4980 Sweetgrass Lane – Riverview Evangelical Free Church	57	61
R-6	2533 Sweetgrass Court	55	60
R-7	2595 Sweetgrass Court	58	61
R-8	2589 Sweetgrass Court	59	61
R-9	2576 SR-76	55	60
R-10	4740 Ramona Drive	54	57
R-11	2095 Rio Vista Drive	52	56
R-12	2818 SR-76	58	62
R-13	2824 SR-76	58	62
R-14	2090 Rio Vista Drive	55	60
R-15	2860 SR-76	56	60
R-16	4715 Calle de la Vuelta	54	58
R-17	4718 Calle de la Vuelta	53	58
R-18	**4554 Estate Drive**	**60**	**66**
R-19	4586 Orange Hill	54	59
R-20	4580 Orange Hill	59	64
R-21	4549 Orange Hill	54	58
R-22	4572 Orange Hill	53	57
R-23	2365 Via Monserate	55	59
R-24	2357 Via Monserate	59	62
R-25	3108 SR-76	61	65
R-26	4081 Limber Pine Road	52	57
R-27	4063 Limber Pine Road	55	59

Receiver ID	Location or Address	Existing Noise Level dBA L_{eq}	Project Build without Barrier dBA L_{eq}
R-28	4082 Limber Pine Road	53	57
R-29	4064 Limber Pine Road	53	57
R-30	3223 Brushwood Lane	53	57
R-31	3239 Brushwood Lane	53	57
R-32	The Golf Club of California	59	65
R-33	4041 Flowerwood Lane	53	56
R-34	4089 Flowerwood Lane	53	56
R-35	The Golf Club of California	62	62
R-36	4121 Star Track Way	52	57
R-37	4028 SR-76	54	59
R-38	4028 SR-76	60	61
R-39	4118 SR-76	61	61
R-40	4118 SR-76	58	62
R-41	4072 Star Track Way	55	60
R-42	**4141 SR-76 (Building A)**	**57**	**69**
R-43	4141 SR-76 (Building B)	56	65
R-44	4141 SR-76 (Building C)	53	61
R-45	4141 SR-76 (Building D)	51	57
R-46	4141 SR-76 (Building D)	48	52
R-47	4296 SR-76	63	64
R-48	4290 SR-76	65	61
R-49	4290 SR-76	56	56
R-50	3484 Sage Road	63	60
R-51	**Nessy Burgers**	**74**	**77**
R-52	**Mobil Gas Station**	**70**	**74**
R-53	**3347 Via Altamira (Pala Mesa Village)**	**66**	**68**
R-54	3339 Via Altamira (Pala Mesa Village)	62	64
R-55	3348 Via Altamira (Pala Mesa Village)	59	60
R-56	4742 Via Tala (Pala Mesa Village)	63	65
R-57	Common Area Club House (Pala Mesa Village)	58	60
R-58	3225 Via de Todos Santos (Pala Mesa Village)	63	65
R-59	3211 Via de Todos Santos (Pala Mesa Village)	63	65
R-60	5820 Lilac Road (Vessels Stallion Farm)[1]	48	48
R-61	5820 Lilac Road (Vessels Stallion Farm)[1]	48	48
R-62	32024 Del Cielo Oeste (Nearest Façade)	48	48
R-63	32024 Del Cielo Oeste (Common Area)	48	48
R-64	31956 Del Cielo Este (Nearest Façade)	47 (27)[2]	47 (27)[1]
R-65	31948 Del Cielo Este (Common Area)	48	48
R-66	31948 Del Cielo Este (Nearest Façade)	48 (28)[2]	48 (28)[1]

[1] Due to the distance between these receivers and SR-76 under the existing conditions, the future No Build Alternative, and the future Existing Alignment Alternative (Preferred Alternative), noise levels could not be accurately modeled and noise levels identified for these locations are based on existing measured levels.
[2] Assumes an exterior to interior building attenuation of 20 dBA for impact analysis.
bold - those receptors where the noise increase due to the proposed build alternatives approaches or exceeds the NAC.

Table 3.19-4. Sensitive Receptors and Noise Impact – Southern Alignment Alternative

Receiver ID	Location or Address	Existing Noise Level dBA L_{eq}	Project Build without Barrier L_{eq} dBA
R-1	5256 South Mission Road (Daniel's Apple Market)	66	68
R-2	5256 South Mission Road (Jack in the Box)	65	64
R-3	2370 SR-76 – County Department of Public Work Facility	61	58
R-4	2370 SR-76 – County Department of Public Work Facility	59	57
R-5	4980 Sweetgrass Lane – Riverview Evangelical Free Church	57	55
R-6	2533 Sweetgrass Court	55	54
R-7	2595 Sweetgrass Court	58	55
R-8	2589 Sweetgrass Court	59	56
R-9	2576 SR-76	55	55
R-10	4740 Ramona Drive	54	52
R-11	2095 Rio Vista Drive	52	53
R-12	2818 SR-76	58	56
R-13	2824 SR-76	58	55
R-14	2090 Rio Vista Drive	55	53
R-15	2860 SR-76	56	54
R-16	4715 Calle de la Vuelta	54	52
R-17	4718 Calle de la Vuelta	53	51
R-18	4554 Estate Drive	60	57
R-19	4586 Orange Hill	54	53
R-20	4580 Orange Hill	59	57
R-21	4549 Orange Hill	54	53
R-22	4572 Orange Hill	53	52
R-23	2365 Via Monserate	55	52
R-24	2357 Via Monserate	59	56
R-25	3108 SR-76	61	58
R-26	4081 Limber Pine Road	52	49
R-27	4063 Limber Pine Road	55	52
R-28	4082 Limber Pine Road	53	50
R-29	4064 Limber Pine Road	53	51
R-30	3223 Brushwood Lane	53	52
R-31	3239 Brushwood Lane	53	52
R-32	The Golf Club of California	59	56
R-33	4041 Flowerwood Lane	53	51
R-34	4089 Flowerwood Lane	53	51
R-35	The Golf Club of California	62	59
R-36	4121 Star Track Way	52	58
R-37	4028 SR-76	54	60
R-38	4028 SR-76	60	62
R-39	4118 SR-76	61	62
R-40	4118 SR-76	58	64
R-41	4072 Star Track Way	55	62
R-42	**4141 SR-76 (Building A)**	**57**	**68**
R-43	4141 SR-76 (Building B)	56	65
R-44	4141 SR-76 (Building C)	53	61
R-45	4141 SR-76 (Building D)	51	57
R-46	4141 SR-76 (Building D)	48	53

Receiver ID	Location or Address	Existing Noise Level dBA L_{eq}	Project Build without Barrier L_{eq} dBA
R-47	4296 SR-76	63	64
R-48	4290 SR-76	65	64
R-49	4290 SR-76	56	59
R-50	3484 Sage Road	63	63
R-51	**Nessy Burgers**	**74**	**76**
R-52	**Mobil Gas Station**	**70**	**73**
R-53	**3347 Via Altamira (Pala Mesa Village)**	**66**	**67**
R-54	3339 Via Altamira (Pala Mesa Village)	62	62
R-55	3348 Via Altamira (Pala Mesa Village)	59	60
R-56	4742 Via Tala (Pala Mesa Village)	63	64
R-57	Common Area Club House (Pala Mesa Village)	58	59
R-58	3225 Via de Todos Santos (Pala Mesa Village)	63	64
R-59	3211 Via de Todos Santos (Pala Mesa Village)	63	63
R-60	5820 Lilac Road (Vessels Stallion Farm)[1]	48	56
R-61	**5820 Lilac Road (Vessels Stallion Farm)[1]**	**48**	**61**
R-62	32024 Del Cielo Oeste (Nearest Façade)	48	56
R-63	32024 Del Cielo Oeste (Common Area)	48	48
R-64	**31956 Del Cielo Este (Nearest Façade)**	**47 (27)[2]**	**61 (41)[1]**
R-65	31948 Del Cielo Este (Common Area)	48	52
R-66	31948 Del Cielo Este (Nearest Façade)	48 (28)[2]	58 (38)[1]

[1] Due to the distance between these receivers and SR-76 under the existing conditions, the future No Build Alternative, and the future Existing Alignment Alternative (Preferred Alternative), noise levels could not be accurately modeled and noise levels identified for these locations are based on existing measured levels.
[2] Assumes an exterior to interior building attenuation of 20 dBA for impact analysis.
bold - those receptors where the noise increase due to the proposed build alternatives approaches or exceeds the NAC.

3.19.3 Environmental Consequences

The predicted peak hour noise levels for the future year 2030 were employed for impact analysis and are shown in Table 3.19-5 for all alternatives.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would impact noise levels at four single-family residences and two commercial businesses.

Construction noise would be heard at nearby receivers and may cause occasional speech disruption, principally during times of pavement breaking. Pile driving and explosive blasting would generate higher noise levels than standard construction and would be limited to daytime hours. Thus, construction-related noise would be considered a temporary nuisance, but not adverse.

Southern Alignment Alternative

The Southern Alignment Alternative would impact noise levels at four single-family residences, 12 multi-family residences, and two commercial businesses.

Table 3.19-5. Predicted Traffic Noise Impacts

Receiver ID	Location or Address	Type of Development	Number of Units Represented	NAC	Predicted Existing Noise Level	Future 2030								
						No Build Alternative			Existing Alignment Alternative (Preferred Alternative)			Southern Alignment Alternative		
						Predicted Noise Level	Change Less Existing	Impact Type	Predicted Noise Level	Change Less Existing	Impact Type	Predicted Noise Level	Change Less Existing	Impact Type
					dBA L_{eq}	dBA L_{eq}	dBA L_{eq}		dBA L_{eq}	dBA L_{eq}		dBA L_{eq}	dBA L_{eq}	
R-18	4554 Estate Drive	Single-family Residential	1	B(67)	60	63	3	None	66	6	A/E	57	-3	None
R-42	4141 SR-76 (Building A)	Single-family Residential	2	B(67)	57	59	2	None	69	12	A/E SI	68	11	A/E
R-48	4290 SR-76	Single-family Residential	1	B(67)	65	67	2	A/E	61	-4	None	64	-1	None
R-51	Nessy Burgers	Commercial	1	C(72)	74	75	1	A/E	77	3	A/E	76	2	A/E
R-52	Mobil Gas Station	Commercial	1	C(72)	70	71	1	A/E	74	4	A/E	73	3	A/E
R-53	3347 Via Altamira (Pala Mesa Village)	Single-family Residential	1	B(67)	66	67	1	A/E	68	2	A/E	67	1	A/E
R-61	5820 Lilac Road (Vessels Stallion Farm)[1]	Play area	1	B(67)	48	48	0	None	48	0	None	61	13	SI
R-64	31956 Del Cielo Este (Nearest Façade)	Multi-family Residential	12	B(67) E(52)	47 (27)[2]	47 (27)[2]	0	None	47 (27)[2]	0	None	61 (41)[2]	14	SI

Notes: A/E = Approach or Exceed, SI = Substantial increase, NAC = Noise Abatement Criterion

[1] Due to the distance between these receivers and SR-76 under the existing conditions, the future No Build Alternative, and the future Existing Alignment Alternative (Preferred Alternative), noise levels could not be accurately modeled and noise levels identified for these locations are based on existing measured levels.

[2] Assumes an exterior to interior building attenuation of 20 dBA for impact analysis.

No Build Alternative

Future predicted noise levels with the No Build Alternative would increase as a result of the increased traffic volumes on the current SR-76 alignment. Noise levels would exceed the NAC at two single-family residences and two commercial businesses.

3.19.4 Avoidance, Minimization, and/or Mitigation Measures

The Noise Study Report (NSR) prepared in October 2009 provided barrier recommendations to abate the noise impacts (Table 3.19-6 and Table 3.19-7). An analysis with barrier heights ranging from 6 feet to 14 feet was conducted for impacted noise-sensitive areas. Within the NSR, all recommended barrier heights and locations were designed to provide a minimum 5-dBA reduction in noise. In addition, all the barriers met or exceeded the minimum barrier heights required to cut the line-of-sight from each receptor to the exhaust stack of heavy trucks. The seven proposed sound walls were found to be preliminarily feasible in the NSR and were carried forward into the next stage of analysis.

Working off the preliminary results of the NSR, the April 2010 Noise Abatement Decision Report (NADR), which is incorporated by reference, was prepared to evaluate the feasibility and reasonableness of measures to abate traffic noise impacts.

The feasibility of a noise abatement measure is an engineering consideration. A minimum noise reduction of 5 dBA must be achieved for the proposed measure to be considered feasible. The determination of reasonableness is more subjective and requires common sense and good judgment. The overall reasonableness is determined by considering a multitude of factors (such as cost, absolute noise levels, noise level change, and abatement benefits) and a final decision is determined after environmental impacts and public input are considered.

Existing Alignment Alternative (Preferred Alternative)

As shown in Table 3.19-6, under the Existing Alignment Alternative (Preferred Alternative), noise abatement was considered for R-18, R-42, and R-53.

Table 3.19-6. Noise Prediction with Barrier Heights – Existing Alignment Alternative (Preferred Alternative)

Receptor # – Location	Sound Wall ID	Project Build without Barrier dBA L_{eq}	Noise Prediction with Barrier dBA L_{eq}				
			(8 ft)	(10 ft)	(12 ft)	(14 ft)	(16 ft)
18 – 4554 Estate Drive	SW1	66	**59**	**57**	**55**	**54**	**54**
42 – 4141 SR-76 (Building A)	SW2A	69	65	65	**64**	**63**	**63**
53 – 3347 Via Altamira Place	SW3A	68	67	66	65	**63**	**62**

Bold data indicate feasible noise abatement (i.e., a 5-dBA or greater reduction).

Sound wall SW1 was considered on private property along the westbound side of SR-76 and would provide shielding for R-18. The sound wall considered would be 100 feet long and 6 feet high. SW1 would benefit one single-family residence and is considered feasible. The reasonable total cost allowance for SW1 is $37,000. The estimated cost without temporary construction easements and permanent easements would be $38,745. The estimated cost with construction easements only would be $41,245. The estimated cost with all easements would be $43,745. All of these amounts are above the reasonable allowance. Construction of SW1 is feasible but not

reasonable due to the estimated construction cost being higher than the total cost allowance for SW1. Construction of SW1 is not recommended.

Sound wall SW2A was considered at the edge of right-of-way along the eastbound side of SR-76 and would provide shielding for R-42. The sound wall considered would be 280 feet long and 10 feet high. SW2 would benefit two single-family residences and is considered feasible. The reasonable total cost allowance for SW1 is $78,000. The estimated cost without temporary construction easements and permanent easements would be $170,957. No easements would be required. The cost allowance is above the reasonable allowance. Construction of SW2A is feasible but not reasonable due to the estimated construction cost being higher than the total cost allowance for SW2A. Construction of SW2A is not recommended.

Sound wall SW3A was considered on private property along the southbound side of Old Highway 395 and would provide shielding for R-53. The sound wall considered would be 205 feet long and 12 feet high. SW3A would benefit one single-family residence and is considered feasible. The reasonable total cost allowance for SW3A is $33,000. The estimated cost without temporary construction easements and permanent easements would be $138,115. The estimated cost with construction easements only would be $140,615. The estimated cost with all easements would be $143,115. All of these amounts are above the reasonable allowance. Construction of SW3A is feasible but not reasonable due to the estimated construction cost being higher than the total cost allowance for SW3A. Construction of SW3A is not recommended.

Southern Alignment Alternative

As shown in Table 3.19-7, under the Southern Alignment Alternative, noise abatement was considered for R-42, R-53, and R-61. Even though R-64 was shown to be affected in Table 3.19-5, interior noise levels do not exceed the NAC, and no abatement is assessed for R-64.

Table 3.19-7. Noise Prediction with Barrier Heights – Southern Alignment Alternative

Receptor – Location	Sound Wall ID	Project Build without Barrier dBA L_{eq}	Noise Prediction with Barrier dBA L_{eq}				
			(8 ft)	(10 ft)	(12 ft)	(14 ft)	(16 ft)
42 – 4141 SR-76 (Building A)	SW2B	68	66	65	64	64	**63**
53 – 3347 Altamira Place	SW3B	67	66	65	64	**62**	**61**
61 – 5820 Lilac Road	SW4	61	59	59	57	**56**	**55**
61 – 5820 Lilac Road	SW5	61	60	58	57	**56**	**56**

Bold data indicate feasible noise abatement (i.e., a 5-dBA or greater reduction).

Sound wall SW2B was considered at the edge of right-of-way along the eastbound side of SR-76 and would provide shielding for R-42. The sound wall considered would be 290 feet long and 14 feet high. SW2B would benefit two single-family residences and is considered feasible. The reasonable total cost allowance for SW2B is $94,000. The estimated cost without temporary construction easements and permanent easements would be $229,587. No easements would be required. The cost allowance is above the reasonable allowance. Construction of SW2B is feasible but not reasonable due to the estimated construction cost being higher than the total cost allowance for SW2B. Construction of SW2B is not recommended.

Sound wall SW3B was considered at the edge of right-of-way along the southbound side of Old Highway 395 and would provide shielding for R-53. The sound wall considered would be 205

feet long and 12 feet high. SW3B would benefit one single-family residence and is considered feasible. The reasonable total cost allowance for SW3B is $33,000. The estimated cost without temporary construction easements and permanent easements would be $138,115. The estimated cost with construction easements only would be $140,615. The estimated cost with all easements would be $143,115. All of these amounts are above the reasonable allowance. Construction of SW3B is feasible but not reasonable due to the estimated construction cost being higher than the total cost allowance for SW3B. Construction of SW3B is not recommended.

Sound wall SW4 was considered at the edge of right-of-way along the southbound side of SR-76 and would provide shielding for R-61. The sound wall considered would be 1,600 feet long and 12 feet high. SW4 would benefit one single-family residence and is considered feasible. The reasonable total cost allowance for SW4 is $49,000. The estimated cost without temporary construction easements and permanent easements would be $1,121,792. No easements would be required. The cost allowance is above the reasonable allowance. Construction of SW4 is feasible but not reasonable due to the estimated construction cost being higher than the total cost allowance for SW4. Construction of SW4 is not recommended.

Sound wall SW5 was considered on private property along the southbound side of SR-76 and would provide shielding for R-61. This sound wall is an alternative to SW4. The sound wall considered would be 265 feet long and 12 feet high. SW5 would benefit one single-family residence and is considered feasible. The reasonable total cost allowance for SW5 is $49,000. The estimated cost without temporary construction easements and permanent easements would be $178,539. The estimated cost with construction easements only would be $181,039. The estimated cost with all easements would be $185,610. All of these amounts are above the reasonable allowance. Construction of SW5 is feasible but not reasonable due to the estimated construction cost being higher than the total cost allowance for SW5. Construction of SW5 is not recommended.

Construction Noise Measures

The following measures are recommended to avoid or minimize construction noise impacts:

- As required by the Caltrans' Standard Specification 7-1.011, each internal combustion engine shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without this muffler.
- Staging areas shall be located at least 500 feet from occupied residential units. Work in staging areas that generates loud noises, such as equipment maintenance, shall not occur during the hours prohibited for construction work.
- If traffic control and construction signs that require power for lighting or flashing are located near residential units, the source of power shall be batteries, solar cells, or another quiet source. Gas- or diesel-fueled internal combustion engines shall not be used.
- Pile driving and explosives blasting shall be restricted to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday, and shall not be allowed on Saturdays, Sundays, or holidays.

BIOLOGICAL ENVIRONMENT

3.20 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. The emphasis of the section should be on the ecological function of the natural communities within the area. 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 the Federal Endangered Species Act are discussed in Section 3.24, Threatened and Endangered Species. Wetlands and other waters are discussed in Section 3.21, Wetlands and Other Waters.

Vegetation communities that are considered potential jurisdictional waters typically result in the vegetation community area being considered sensitive. These waters are regulated by Sections 401 and 404 of the Clean Water Act (CWA), Sections 1600 et seq. of the California Fish and Game Code, and the Porter-Cologne Water Quality Control Act. The occurrence of suitable habitat for special-status plant and wildlife species also raises the sensitivity of a vegetation community. CEQA Guidelines §15206 (b)(5) defines “sensitive wildlife habitats” as “including but not limited to riparian lands, wetlands, bays, estuaries, and marshes and habitats for endangered, rare and threatened species as defined by §15380 (Chapter 3).” Determination of vegetation community sensitivity was also based on guidance provided by resource agencies, including CDFG’s California Natural Diversity Database (CNDDB); California Native Plant Society; Multiple Species Conservation Program (NCMSCP) documents; and the County of San Diego’s Biological Mitigation Ordinance (BMO), Resource Protection Ordinance (RPO), County of San Diego Guidelines for Determining Significance for Biological Resources, and Habitat Loss Permit (HLP) ordinance. Based on the above guidance, sensitive vegetation communities within the project area include all wetland, riparian, and aquatic types, as well as several upland communities such as scrub habitats, native and nonnative grasslands, and oak woodlands.

The proposed project is located within the jurisdiction of the County of San Diego (unincorporated); as such, this project is within the boundaries of the Draft NCMSCP. Caltrans is not a signatory to local NCCPs. Throughout the development of the Draft NCMSCP, Caltrans has coordinated with the County of San Diego in anticipation of the proposed project. The Draft NCMSCP incorporated the SR-76 Plan area into the Draft NCMSCP analysis as a 200-foot-wide potential alignment corridor for road improvements based on preliminary work done by Caltrans (County of San Diego 2009). An additional buffer of 150 feet was included to the Draft NCMSCP analysis to address potential indirect impacts (County of San Diego 2009). The entire SR-76 Plan area was calculated in the Draft NCMSCP conservation analysis as zero percent conserved so all species and habitats within this area were calculated as if they are taken (County of San Diego 2009). This does not mean to imply that this entire area will be impacted but was done to conservatively estimate anticipated impacts as the basis for preparation of a Biological Opinion and issuance of a section 10(a) permit for the Draft NCMSCP (County of San Diego 2009).

The Draft NCMSCP has designated Pre-Approved Mitigation Areas (PAMAs) within the Existing Alignment (Preferred Alternative) and the Southern Alignment Alternatives. These areas have high biological value in which conservation is encouraged. In 2004, FHWA issued a guidance memo, recommending that mitigation standards and protocols defined in approved Habitat Conservation Plans (HCPs) be applied to those projects within areas covered by the HCPs. Mitigation ratios for this project would meet or exceed those proposed in the Draft NCMSCP and Biological Mitigation Ordinance.

3.20.1 Affected Environment

The following technical reports were completed in support of this section of the document and are incorporated by reference: the State Route 76 South Mission Road to Interstate 15 Highway Improvement Project Natural Environment Study (NES)(August 2010), Wildlife Movement Study (August 2009), and SR-76 South Mission to I-15 Highway Improvement Project Jurisdictional Wetland Delineation Report for Waters of the United States and State of California (December 2008).

The proposed project footprint is approximately 186 acres for the Existing Alignment Alternative (Preferred Alternative) and 192 acres for the Southern Alignment Alternative. The Southern Alignment Alternative could also require an additional 46-acre footprint for the potential County upgrade of the existing SR-76. The Biological Study Area (BSA) for the proposed project (Figure 3.20-1) includes the proposed construction limits for both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative, all areas in between these two alignment alternatives, and an area north and south of the proposed alignments of approximately 500 feet. The BSA also includes the SR-76/I-15 interchange, the area under the I-15 bridge where it crosses the San Luis Rey River, and 200 feet west of the I-15 bridge. The BSA is approximately 2,348 acres. This includes an overlap area with the adjacent SR-76 Melrose Drive to South Mission Road Highway Improvement Project. The approximate acreage of the BSA without overlap with the SR-76 Melrose Drive to South Mission Road Highway Improvement Project is 2,192 acres. Biological surveys conducted within the BSA included vegetation mapping; general wildlife surveys; habitat suitability assessments; rare plant surveys; delineations of state and federal jurisdictional waters; and protocol-level surveys for the arroyo toad (*Bufo californicus*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo belli pusillus*), and coastal California gnatcatcher (*Polioptila californica californica*).

A number of vegetation communities and other cover types were identified in the BSA, including riparian and wetland, upland, and nonnative vegetation types. The Holland vegetation classification system was used to identify vegetation communities. Vegetation communities and other cover types found in the BSA are depicted in Figures 3.20-2a through 3.20-3b and detailed in Table 3.20-1. Descriptions of each vegetation type are provided below.

Sensitive Riparian and Wetland Communities

Arrowweed Scrub

This vegetation community consists of moderate or dense streamside thickets strongly dominated by arrowweed (*Pluchea sericea*). Cattails (*Typha* spp.), bulrushes (*Schoenoplectus* spp.), and saltgrass (*Distichlis spicata*) often occur along the margins of this community, but within the arrowweed thickets there is generally not a high presence of plant species other than arrowweed. Arrowweed scrub occurs within the central portion of the BSA as six discrete monotypic patches. These patches are bordered by other riparian species such as willow (*Salix*

spp.); western cottonwood (*Populus fremontii*); and several nonnative grasses and forbs, including brome grasses (*Bromus* spp.), filaree (*Erodium* spp.), and barley (*Hordeum* spp.). Arrowweed scrub does not occur within the footprints of the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative.

Table 3.20-1. Vegetation Communities and Cover Types (Acres)

Vegetation Communities and Cover Types	Biological Study Area[a,b]
Riparian and Wetland	
Arrowweed Scrub	1.76
Disturbed Wetland (Arundo Scrub)	8.52
Coastal and Valley Freshwater Marsh	2.86
Elderberry Scrub	6.93
Mulefat Scrub	23.88
Nonvegetated Channel	6.46
Open Water	10.29
Southern Arroyo Willow Riparian Forest	2.03
Southern Cottonwood-Willow Riparian Forest	507.08
Southern Willow Scrub	73.86
Tamarisk Scrub	1.21
Subtotal Riparian and Wetland	*644.86*
Upland	
Coast Live Oak Woodland	20.76
Diegan Coastal Sage Scrub	138.91
Diegan Coastal Sage Scrub (Disturbed)	68.67
Nonnative Grassland	396.43
Southern Mixed Chaparral	12.91
Valley Needlegrass Grassland (Native)	3.46
Subtotal Upland	*641.15*
Other Vegetation and Cover Types	
Disturbed Habitat	76.45
Eucalyptus Woodland	19.38
Field/Pasture	337.19
General Agriculture	183.76
Nonnative Vegetation (Ornamental)	44.97
Orchards and Vineyards	37.23
Urban/Developed	206.67
Subtotal Other Cover Types	*905.64*
Total	**2,191.65**

[a] Not including the overlap area with the adjacent SR-76 Melrose to South Mission project footprint.
[b] All acreages are rounded to the nearest hundredth after summing.

Disturbed Wetland (Arundo Scrub)

This vegetation community is a riparian thicket dominated (50 percent or more) by giant reed (*Arundo donax*). Giant reed is a nonnative invasive species notorious for displacing native vegetation. The Arundo-dominated riparian community type is extensive along major rivers of coastal southern California, including the San Luis Rey River. In many cases, this community occurs as monotypic stands of giant reed, interspersed among the riparian forest within the floodplain of the San Luis Rey River in association with disturbed areas. Arundo-dominated riparian occurs in small patches throughout the riparian areas of the BSA, including portions of the footprint of the Existing Alignment Alternative (Preferred Alternative) and the existing SR-76 upgrade portion of the Southern Alignment Alternative.

Coastal and Valley Freshwater Marsh

This vegetation community is dominated by perennial, emergent monocots, such as bulrushes and cattails, forming completely closed canopies. Other typical species include sedges (*Carex*, *Cyperus*, and *Eleocharis* spp.), water cress (*Rorippa nasturtium-aquaticum*), toad rush (*Juncus bufonius*), starwort (*Spergularia arvensis arvensis*), and Indian sweet clover (*Melilotus indica*). These constituents are found in calm, standing, freshwater. Coastal and valley freshwater marsh occurs along the banks of the San Luis Rey River and two stock ponds within the BSA, in general association with the fringes of perennial inundation. This vegetation community occurs within the footprint of the Existing Alignment Alternative (Preferred Alternative) and the existing SR-76 upgrade portion of the Southern Alignment Alternative.

Elderberry Scrub

Elderberry scrub (or elderberry savannah) is an open, winter-deciduous shrub savannah dominated by blue elderberry (*Sambucus mexicana*), usually with an understory of introduced annual grasses and forbs. Nonnative species such as brome grasses and short-pod mustard (*Hirschfeldia incana*) occur in the understory, as this community is often adjacent to nonnative grassland within the BSA. Elderberry scrub primarily occurs at the edge of the riparian extent of the San Luis Rey River floodplain within the central portion of the BSA. Elderberry scrub is not found within the footprint of the Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative.

Mulefat Scrub

Mulefat scrub is a riparian scrub community dominated by mulefat (*Baccharis salicifolia*). An early seral community, mulefat scrub is maintained by frequent flooding, which prevents the transition to a cottonwood or sycamore (*Platanus racemosa*)-dominated woodland. Mulefat scrub can be found in intermittent stream channels, with typical species including mulefat, arrowweed, poison hemlock (*Conium maculatum*), willows, and Santa Barbara sedge (*Carex barbarae*). Disturbed portions of the community also have an abundance of short-pod mustard and milk thistle (*Silybum marianum*). Mulefat scrub occurs primarily within the central portion of the BSA and includes some areas that are highly disturbed. This community occurs within the footprints of both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative.

Nonvegetated Channel

This cover type consists of unvegetated washes or flood channels. Some vegetation may grow on the edge of the variable water line but totals less than 10 percent vegetative cover. The low-lying portions of channels are used by wildlife as local migration corridors. Nonvegetated channel occurs within drainages that act as tributaries to the San Luis Rey River. A small area of unvegetated channel is located within the footprint of the Existing Alignment Alternative (Preferred Alternative).

Open Water

This cover type is composed of year-round bodies of water such as lakes, streams, ponds, or rivers. These areas are covered by water and have less than 10 percent vegetative cover. Open water is typically devoid of vegetation, aside from the potential presence of submerged or floating aquatics such as duckweed (*Lemna* sp.), hornwort (*Ceratophyllum demersum*),

pondweed (*Potamogeton* sp.), and Pacific mosquito fern (*Azolla filiculoides*). Emergent freshwater marsh vegetation often occurs along the periphery of open water in permanently saturated soils. In the BSA, this cover type occurs within the channel of the San Luis Rey River and also within two stock ponds. This cover type occurs within the footprint of both alignment alternatives. As a result of population growth, the river, its stream channel and the surrounding riparian have been the altered and managed. The channelization of the river, manipulation of riparian vegetation, draining and downsizing the estuary, and utilizing numerous wells throughout the river have cumulatively changed the form, function, and habitat of the San Luis Rey River.

Southern Arroyo Willow Riparian Forest

This vegetation community is a winter-deciduous riparian forest dominated by arroyo willow (*Salix lasiolepis*) but containing other broadleaved trees. It is characterized by closed or nearly closed canopies with shrubby willow understories and includes Douglas mugwort (*Artemisia douglasiana*), mulefat, sycamore, western cottonwood, and willow species (e.g., *S. gooddingii*, *S. hindsiana*, *S. lasiandra*, and *S. lasiolepis*).

This vegetation community occurs in a single area approximately 2 acres within the central portion of the BSA and represents a very mature portion of riparian forest with little disturbance. This cover type is not present within the footprints of the Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative.

Southern Cottonwood-Willow Riparian Forest

This vegetation community is a winter-deciduous riparian forest dominated by cottonwood with willow components. The understory is typically shrubby willows. Typical species include western ragweed (*Ambrosia psilostachya*), Douglas mugwort, mulefat, brome grasses, sycamore, cottonwood, and several willow species (*S. gooddingii*, *S. hindsiana*, and *S. lasiandra*). This vegetation community occurs throughout the BSA, primarily following the floodplain of the San Luis Rey River and forming a riparian margin along its banks. This community occurs within the footprints of both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative.

Southern Willow Scrub

This vegetation community is described as dense, winter-deciduous riparian thickets dominated by willow species with occasional cottonwood and sycamore trees. The canopy is dense and closed, not allowing the formation of much of an understory. The common species include willows (e.g., *S. gooddingii*, *S. hindsiana*, *S. lasiolepis*, and *S. laevigata*), arrowweed, brome grasses, and cottonwood. Southern willow scrub occurs throughout the BSA, generally following the floodplain of the San Luis Rey River and forming a riparian margin along its banks. However, unlike riparian forests, this community is not as confined by the hydrology of the river.

Southern willow scrub was observed within the BSA outside the floodplain of the San Luis Rey River. Intact southern willow scrub occurs primarily within and along riparian forests along the San Luis Rey River, while disturbed southern willow scrub occurs primarily in the central portion of the BSA, bordering nonnative grassland and field/pasture. This community occurs within the footprints of both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative.

Tamarisk Scrub

This nonnative vegetation community is a monoculture of tamarisk species (commonly *T. ramosissima*). Like the arundo-dominated riparian community mentioned above, this community is found interspersed throughout the BSA among riparian forest within the floodplain of the San Luis Rey River in association with disturbed areas. It usually establishes following a disturbance, replacing and excluding native riparian vegetation due to its superior competitive abilities. This cover type is not present within the footprints of the Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative.

Sensitive Upland Vegetation Communities

Coast Live Oak Woodland

This vegetation community is dominated by the coast live oak (*Quercus agrifolia*). There may be a shrubby understory composed of toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), or blue elderberry. A continuous herb layer exists, usually dominated by nonnative grasses and invasive forbs such as milk thistle and knot hedge parsley (*Torilis nodosa*). This vegetation community occurs primarily along the southern margin of the BSA, away from the floodplain of the San Luis Rey River. This community occurs within the footprints of both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative.

Diegan Coastal Sage Scrub

This vegetation community is composed of low shrubs dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac, lemonadeberry (*Rhus integrifolia*), white sage (*Salvia apiana*), coast monkeyflower (*Mimulus aurantiacus* var. *puniceus*), and brome grasses. Diegan coastal sage scrub occurs primarily along the northern and southern margins of the BSA, away from the floodplain of the San Luis Rey River. Intact Diegan coastal sage scrub occurs on the north- and south-facing hill slopes within the BSA, while disturbed Diegan coastal sage scrub occurs adjacent to disturbed areas of lower relief, such as nonnative grassland and disturbed habitat. This community occurs within the footprints of both alignment alternatives.

Nonnative Grassland

This vegetation community consists of annual grassland composed primarily of nonnative grasses and forbs with some native annual forbs. The common dominant species include wild oats (*Avena* spp.), brome grasses, Bermuda grass (*Cynodon dactylon*), filaree, short-pod mustard, and other mustards (*Brassica* spp.). This vegetation community occurs throughout much of the undeveloped portion of the BSA, interspersed between riparian thickets and extending away from the floodplain of the San Luis Rey River. This community occurs within the footprints of both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative.

Southern Mixed Chaparral

Southern mixed chaparral is a diverse mixture of sclerophyllous shrubs occurring in the foothills of San Diego County and northern Baja California. The common dominant species include chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), scrub oak (*Quercus berberidifolia*), and California lilac (*Ceanothus* spp.). This vegetation community

occurs in one area in the southeastern portion of the BSA but does not occur within the footprint of the Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative.

Valley Needlegrass Grassland

Purple needlegrass (*Nassella pulchra*) is the dominant perennial bunchgrass of this native grassland vegetation community. Native and nonnative annual plant species occur between the perennial bunchgrasses. The cover of the perennial grasses can be as low as 20 percent and still be categorized as this community type. Dominant species include brome grasses and filaree. This vegetation community occurs in the southwestern portion of the BSA, well away from the floodplain of the San Luis Rey River. This community does not occur within the footprint of the Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative.

Other Cover Types

Several other nonnative, disturbed, or developed habitat types also occur within the project vicinity. They include disturbed habitat, eucalyptus woodland, field/pasture, general agriculture, ornamental (nonnative) vegetation, orchards/vineyards, and urban/developed land. These communities are not considered sensitive by state or federal agencies, or by the County of San Diego, because they typically have limited biological value and are not vital in supporting the regional population stability of sensitive species. Though briefly described here, they have not been evaluated for potential impacts resulting from the alignment alternatives.

Disturbed Habitat: This cover type can be described as an area that has been physically disturbed through human activities such as grading, clearing, grubbing, off-road vehicle trails, etc., but still has a soil substrate (i.e., not paved). The former vegetation community can no longer be discerned and the area is usually dominated by nonnative species, including thistles (*Centaurea*, *Carduus*, *Cynara*, *Sonchus* spp.), mustards, and brome grasses. The primary dominant species observed in disturbed habitat in the BSA is short pod mustard.

Eucalyptus Woodland: This nonnative vegetation community is dominated by one or more eucalyptus species (*Eucalyptus* spp.). Often, a dense stand of eucalyptus is formed with little understory due to the shading and chemical inhibition of the leaf and bark litter, which is copiously produced. These stands can be found near water sources. This community is generally distributed throughout the BSA in association with upland areas outside the floodplain of the San Luis Rey River; however, individual eucalyptus trees are also scattered throughout the riparian margins of the river.

Field/Pasture: This cover type includes irrigated planted fields of crops and nonnative grass pastures for livestock. Within the BSA, this cover type consisted of fallowed fields used more for grazing than for planted crops. Dominant plant species observed include Indian sweet clover and brome grasses.

General Agriculture: This is a general cover type describing active agricultural lands.

Nonnative Ornamental Vegetation: This cover type is composed of ornamental nonnative vegetation. The cover type occurs throughout the BSA in small patches associated with the interface between developed and undeveloped areas.

Orchards and Vineyards: Orchards are composed of irrigated trees or shrubs planted in rows. Vineyards are single-species crops also planted in rows and usually supported by wood or wire structures.

Urban/Developed: This cover type describes areas that have been paved or built on and no longer support native vegetation. This includes permanent or semipermanent structures, pavement, and landscaped areas not included under the nonnative ornamental vegetation cover type.

Wildlife Corridors

Wildlife corridors are linear landscape features that allow for species movement between patches of habitat that would otherwise be disconnected. They are both regional or local. Regional corridors are those linking two or more large areas of natural open space. Local corridors are those that allow resident animals to access critical resources within a smaller, more local context.

The San Luis Rey River with its associated riparian habitat has been identified as an important regional wildlife movement corridor, providing connectivity to conservation lands in both Riverside County to the north and coastal areas to the west, including Marine Corps Base Camp Pendleton. Riparian corridors are important to regional connectivity, providing linear habitat with sufficient vegetative cover to allow the passage of many different types of wildlife. Large mammals are known to travel through riparian corridors. For some species, such as mountain lions, riparian habitat is often preferred for movement, and the presence of this habitat may reduce some of the negative impacts of roads as a deterrent for movement. Riparian areas are important to local wildlife movement. Many animals specifically inhabit these areas throughout their lives, utilize these areas for at least one life-stage, or travel in and out of these areas from adjacent upland habitats.

A wildlife movement study was conducted throughout most of the BSA from July 2006 through March 2009 to determine potential impacts of the proposed alignment alternatives on wildlife movement and the current wildlife usage of underpasses along the existing SR-76 roadway. The study design included 1.5 years of data collection and employed tracking stations, tracking transects, and roadkill surveys to characterize wildlife movement for focal species. Survey results were evaluated using geographic information systems (GIS) software and a variety of statistical analyses.

Results of the wildlife movement study determined that the existing SR-76 roadway has both direct and indirect effects on wildlife movement and mortality. As the existing SR-76 borders the habitat transition area between the San Luis Rey River riparian corridor and adjacent upland habitat, the roadway functions as a barrier to wildlife movement (Figure 3.20-4). Large species activity was lower along the existing SR-76 roadway than within the riparian corridor or upland habitat to the south, indicating a behavioral barrier effect. Smaller species were more often found to the north of the riparian corridor, making them more susceptible to mortality along the existing SR-76 roadway.

The wildlife movement study also identified two important trends in the BSA: (1) regional east/west wildlife movement through the riparian corridor and in the upland habitat to the south, and (2) north/south movement between adjacent habitat types for smaller resident species attempting to find vital resources on the northern riparian/upland border.

3.20.2 Environmental Consequences

Impacts refer to the detrimental effects of a project and can be either direct or indirect, permanent or temporary. Permanent impacts can occur through construction activities such as the placement of everlasting structures. Effects to habitats located within an alignment footprint are considered permanent effects. Temporary impacts result from ground disturbance and vegetation clearing from construction activities in areas that would be restored to their preconstruction state after construction. Impacts to habitat located between the alignments and limits of disturbance (for construction access and grading) have been assessed as temporary direct effects.

Indirect impacts apply to the secondary effects of an action, occur later in time, and can include noise, increased shade from structures, edge effects, habitat fragmentation, erosion, sedimentation, human intrusion, and night-time lighting and associated potential for increased predation. Indirect impacts to sensitive vegetation have been determined to potentially occur within a 300-foot zone around each alignment footprint. Indirect impacts are quantitatively addressed in Section 3.24, Threatened and Endangered Species.

Specific alignment-based comparisons of impacts for each sensitive vegetation community and other cover types within the BSA are provided in Table 3.20-2. This comprehensive table provides quantitative data for permanent and temporary impacts, and noise impacts and indirect impacts, as well as acres required for compensatory mitigation. Permanent and temporary impacts that could result with the County's potential upgrade of the existing SR-76 are included.

Impacts to Wetland and Riparian Vegetation

Existing Alignment Alternative (Preferred Alternative)

As shown in Table 3.20-2, the Existing Alignment Alternative (Preferred Alternative) would result in permanent impacts to wetland and riparian vegetation from the long-term loss of resources (see Figures 3.20-2a and 3.20-2b). This alignment would permanently impact 0.63 acre of disturbed wetland (arundo scrub), 0.06 acre of coastal and valley freshwater marsh, 0.01 acre of open water, 5.36 acres of mulefat scrub, 22.58 acres of southern cottonwood-willow riparian forest, and 3.99 acres of southern willow scrub. The Existing Alignment Alternative (Preferred Alternative) would result in temporary impacts to wetlands and riparian vegetation from the short-term loss of resources during construction activities, including haul routes, borrow areas, grading areas, and construction staging areas. This alignment would temporarily impact 0.31 acre of disturbed wetland (arundo scrub), 0.05 acre of coastal and valley freshwater marsh, 0.93 acre of mulefat scrub, 0.09 acre of open water, 7.73 acres of southern cottonwood-willow riparian forest, and 1.49 acres of southern willow scrub. The project may have potential short-term impacts to water quality during construction activities due to soil disturbance. Potential pollutants of concern include vehicle fluids, oil, trash, and debris. If dewatering is necessary, there would be a temporary movement recirculation of water. The water would be returned to the San Luis Rey River and would percolate back to groundwater. A portion of the Existing Alignment Alternative (Preferred Alternative) closely contours the San Luis Rey River, potentially fragmenting the river channel. Smaller tributaries and confluences, such as Live Oak Creek, would also be traversed. These smaller tributaries could have altered temperature and flow as a result. The alteration of flow and fragmentation of the San Luis Rey River system would reduce aquatic habitat functions and values.

This alignment would indirectly impact 0.43 acre of disturbed wetland, 0.01 acre of coastal and valley freshwater marsh, 1.28 acres of open water, 0.36 acre of elderberry scrub, 27.63 acres of southern cottonwood-willow riparian forest, and 7.26 acres of southern willow scrub. The project would add additional surface paving area, and may potentially increase total or peak runoff discharges (which will be treated). New construction could also have an effect on downstream channel stability through changes in the rate and volume of runoff, the sediment load due to changes in the land surfaces, and other hydraulic changes from stream and/or creek encroachments, crossings, or realignment.

Southern Alignment Alternative

The Southern Alignment Alternative would result in permanent impacts to wetland and riparian vegetation (Figures 3.20-3a and 3.20-3b).This alignment would permanently impact 0.10 acre of disturbed wetland (arundo scrub), 2.29 acres of mulefat, 3.67 acres of open water, 8.58 acres of southern cottonwood-willow riparian forest, and 0.73 acre of southern willow scrub.

The Southern Alignment Alternative would result in temporary impacts to 0.31 acre of arundo scrub and disturbed wetland, 0.55 acre of mulefat scrub, 0.30 acre of open water, 3.11 acres of southern cottonwood-willow riparian forest, and 0.27 acre of southern willow scrub. The project may have potential short-term impacts to water quality during construction activities due to soil disturbance. Potential pollutants of concern include vehicle fluids, oil, trash, and debris. If dewatering is necessary, there would be a temporary movement recirculation of water. The water would be returned to the San Luis Rey River and would percolate back to groundwater.

The Southern Alignment Alternative would have indirect shading impacts over riparian and wetland areas, which may include future decreases in plant growth and invertebrate abundance in shaded areas. These increased shadows would be cast on both sides of bridge crossings. Shading from the expanded bridge footprints and the subsequently increased shadow areas that would be cast on both sides of the expanded bridges would have an effect on vegetation and benthic communities, possibly decreasing their overall productivity. Additional indirect impacts also include increased access for human activity within the immediate area and increased runoff from expanded paved surfaces. This alignment would indirectly impact 0.50 acre of disturbed wetland, 0.28 acre of elderberry scrub, 2.94 acres of mulefat scrub, 3.07 acres of open water, 68.52 acres of southern cottonwood-willow riparian forest, 3.92 acres of southern willow scrub, and 0.36 acre of tamarisk scrub. The project would add additional surface paving area, and may potentially increase total or peak runoff discharges (which will be treated). New construction could also have an effect on downstream channel stability through changes in the rate and volume of runoff, the sediment load due to changes in the land surfaces, and other hydraulic changes from stream and/or creek encroachments, crossings, or realignment.

Impacts to Upland Vegetation Communities

Existing Alignment Alternative (Preferred Alternative)

As shown in Table 3.20-2, the Existing Alignment Alternative (Preferred Alternative) would result in permanent impacts to upland vegetation communities from the long-term loss of resources. These impacts are depicted in Figures 3.20-2a and 3.20-2b. This alignment would permanently impact 2.09 acres of coast live oak woodland, 0.54 acre of Diegan coastal sage scrub, 6.35 acres of disturbed Diegan coastal sage scrub, and 27.14 acres of nonnative grassland.

Table 3.20-2. Summary of Permanent, Temporary and Indirect Impacts to Sensitive Vegetation Communities within the Alignment Alternatives (Acres)[a]

Vegetation Communities and Cover Type	Total Area within the BSA (acres)	Existing Alignment Alternative (Preferred Alternative) Project Impacts (acres)[c]						Southern Alignment Alternative Project Impacts (acres)[c]						County's Upgrade of Existing SR-76[b, c]	
		Permanent Impacts	Mitigation ratios and acres for permanent impacts	Temporary Impacts (mitigated on-site at 1:1)	Indirect Impacts (300-ft buffer)[a]	Noise ≥ 60 dBA (beyond 300 ft buffer)	Total Indirect Impacts (mitigated at 1:1)	Permanent Impacts	Mitigation ratios and acres for permanent impacts	Temporary Impacts (mitigated on-site at 1:1)	Indirect Impacts (300-ft buffer)[a]	Noise ≥ 60 dBA (beyond 300 ft buffer)	Total Indirect Impacts (mitigated at 1:1)	Permanent Impacts	Temporary Impacts
Riparian and Wetlands															
Disturbed Wetland (Arundo Scrub)	8.52	0.63	1:1 = 0.63 restoration	0.31	0.18	0.25	0.43	0.10	1:1 = 0.10 restoration	0.31	0.27	0.23	0.50	0.06	0.05
Coastal and Valley Freshwater Marsh	2.86	0.06	3:1 = 0.18 creation	0.05	0.01	0	0.01	0.0	0	0.0	0.0	0	0	0.11	0.05
Elderberry Scrub	6.93	0.0	0	0.0	0.21	0.15	0.36	0.0	0	0.0	0.13	0.15	0.28	0	0
Mulefat Scrub	23.88	5.36	3:1 = 16.08 5.36 creation; 10.72 restoration	0.93	0	0	0	2.29	3:1 = 6.87 2.29 creation; 4.58 restoration	0.55	2.01	0.93	2.94	1.98	0.71
Southern Cottonwood-Willow Riparian Forest	507.08	22.58	3:1 = 67.8 22.6 creation; 45.2 restoration	7.73	7.33	20.30	27.63	8.58	3:1 = 25.74 8.58 creation; 17.16 restoration	3.11	48.92	19.60	68.52	6.05	2.93
Southern Willow Scrub	73.86	3.99	3:1 = 11.97 3.99 creation; 7.98 restoration	1.49	4.15	3.11	7.26	0.73	3:1 = 2.19 0.73 creation; 1.46 restoration	0.27	1.35	2.57	3.92	0.55	0.32
Tamarisk Scrub	1.21	0.0	0	0.0	0	0	0	0.0	0	0.0	0.35	0.01	0.36	0	0
Open Water (San Luis Rey River)	10.29	0.01	3:1 = 0.03 0.01 creation; 0.02 restoration	0.09	0.08	1.20	1.28	3.67	3:1 = 11.01 3.67 creation; 7.34 restoration	0.30	1.87	1.20	3.07	0	0
Riparian and Wetlands Total[c]	***634.63***	***32.65***	***96.69 = 32.14 creation; 64.55 restoration***	***10.6***	***11.96***	***25.01***	***36.97***	***15.37***	***45.91 = 15.27 creation; 30.64 restoration***	***4.54***	***54.9***	***24.69***	***79.59***	*8.75*	*4.06*
Uplands															
Coast Live Oak Woodland	20.76	2.09	2:1 = 4.18	0	1.36	0	1.36	1.78	2:1 = 3.56	0.36	0.76	0	0.76	0.00	0.00
Diegan Coastal Sage Scrub	138.91	0.54	2:1 = 1.08	1.83	0	1.93	1.93	0.21	2:1 = 0.42	1.91	11.32	1.01	12.33	0.07	0.52
Diegan Coastal Sage Scrub (Disturbed)	68.67	6.35	2:1 = 12.7	1.66	0.13	2.63	2.76	6.16	2:1 = 12.32	1.27	0.12	3.96	4.08	1.20	0.57
Nonnative Grassland	396.43	27.14	Total = 26.88 1:1 toad habitat = 26.61; 0.5:1 other = 0.27	20.72	27.18	40.30	67.48	25.13	Total = 23.37 1:1 toad habitat = 21.6; 0.5:1 other = 1.77	22.03	61.57	40.68	102.25	4.91	3.03
Valley Needlegrass Grassland (native)	3.46	0.0	0	0.0	0.0	0	0	0.0	0	0.0	1.83	0	1.83	0	0
Uplands Total[c]	***628.23***	***36.12***	***44.84***	***24.21***	***28.67***	***44.86***	***73.53***	***33.28***	***39.67***	***25.57***	***75.6***	***45.65***	***121.25***	*6.19*	*4.12*
Total all Vegetation[c]	**1,269.32**	**68.77**	**141.53**	**34.81**	**40.63**	**69.86**	**110.5**	**48.65**	**85.58**	**30.11**	**130.5**	**70.34**	**200.84**	**14.94**	**8.18**

[a] The acreages shown for indirect impacts would incur both construction-related (temporary) and operations-related (permanent) indirect impacts. Current indirect impacts resulting from the existing highway have been subtracted from the total.
[b] Indirect impacts resulting from the County's upgrade of SR-76 are not available.
[c] All acreages are rounded to the nearest hundredth after summing.

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The Existing Alignment Alternative (Preferred Alternative) would result in temporary impacts to upland vegetation from the short-term loss of resources during construction activities, including the haul routes, borrow areas, grading areas, and construction staging areas that would be necessary to complete the project. This alignment would temporarily impact 1.83 acres of Diegan coastal sage scrub, 1.66 acres of disturbed Diegan coastal sage scrub, and 20.72 acres of nonnative grassland.

Indirect impacts to upland habitat functions and values would include edge effects (effects resulting from the edge created between natural and developed land), habitat fragmentation, and closer proximity to human habitation. Effects may include increased or decreased sunlight, soil moisture, temperature, wind, and invasive species. This alignment would indirectly impact 1.36 acre of coast live oak woodland, 0.13 acre of disturbed Diegan coastal sage scrub, and 27.18 acres of nonnative grassland.

Southern Alignment Alternative

The Southern Alignment Alternative would result in permanent impacts to upland vegetation from the long-term loss of resources. These impacts are shown in Table 3.20-2 and Figures 3.20-3a and 3.20-3b. This alignment would permanently impact 1.78 acres of coast live oak woodland, 0.21 acre of Diegan coastal sage scrub, 6.16 acres of disturbed Diegan coastal sage scrub, and 25.13 acres of nonnative grassland.

The Southern Alignment Alternative would result in temporary impacts to upland vegetation from the short-term loss of resources during construction activities, including the haul routes, borrow areas, grading areas, and construction staging areas that would be necessary to complete the project. This alignment would temporarily impact 0.36 acre of coast live oak woodland, 1.91 acres of Diegan coastal sage scrub, 1.27 acres of disturbed Diegan coastal sage scrub, and 22.03 acres of nonnative grassland.

Indirect impacts to upland habitat functions and values would include habitat fragmentation and edge effects. Effects may also include increased human intrusion and noise; increased or decreased sunlight; or changes in soil moisture, temperature, and wind that could create conditions suitable for invasive species intrusion. This alignment would indirectly impact 0.76 acre of coast live oak woodland, 11.32 acres of Diegan coastal sage scrub, 0.12 acre of disturbed Diegan coastal sage scrub, 61.57 acres of nonnative grassland, and 1.83 acres of valley needlegrass grassland.

Impacts to Wildlife Corridors

Both the Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative would result in temporary and permanent impacts to the San Luis Rey River regional wildlife corridor and local wildlife corridors (Figure 3.20-4). The impacts would result from the loss of habitats that contribute to the corridors, reduction or fragmentation of habitat connectivity, reduction of corridor width, and increased edge effects. The extent to which these impacts affect species or suites of species is variable due to the varying mobility levels between species and the varying levels of tolerance for habitat reduction and edge effects. Large mammals, including bobcats, mountain lions, deer, and coyotes, would continue to use the corridor.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) generally follows the existing SR-76 roadway, which is in the transition zone between riparian and upland habitat. Movement studies have shown substantial movement within the local wildlife corridor of resident species from upland to riparian habitats. Many species are likely year-round residents (striped skunk, raccoon, gray fox, long-tailed weasel, rabbits, and rodents) that require access to both upland and riparian resources.

For the majority of the Existing Alignment Alternative (Preferred Alternative), the road would continue to be located within the transitional area between upland and riparian habitat and would create a wider barrier to local wildlife movement. However, plans for wildlife directional fencing and undercrossings may decrease this barrier and, therefore, decrease mortality rates. The Existing Alignment Alternative (Preferred Alternative) also includes a new bridge crossing at Gird Road near the confluence of Live Oak Creek at the San Luis Rey River. Wildlife may be affected by increased noise and light from traffic from the bridge. However, plans to allow for wildlife movement under the alignment, plus bridge rail design, wildlife directional fencing, and road undercrossings, may decrease these impacts.

The Existing Alignment Alternative (Preferred Alternative) would have approximately 102.2 acres of permanent impacts to the PAMA, designated by the Draft NCMSCP, 41.65 acres of temporary impacts, and approximately 151.0 acres of indirect impacts (Figure 3.20-4).

Southern Alignment Alternative

The Southern Alignment Alternative would create a new barrier to species movement, both locally and regionally. Movement studies have shown higher large mammal activity south of the river, as well as greater species diversity. Some sensitive species such as mountain lion, badger, and mule deer were found only within the riparian corridor and south of the river. These species and others are known to be sensitive to urbanization, habitat fragmentation, and roads, and would potentially suffer greater negative consequences as a result of the Southern Alignment Alternative compared to the Existing Alignment Alternative (Preferred Alternative).

The Southern Alignment Alternative also includes two new bridge crossings over the San Luis Rey River. Wildlife may be affected by increased noise and light from traffic on the roadway crossing the San Luis Rey River corridor, as well as from narrowing of the corridor within the riparian habitat. This would potentially reduce the effectiveness of the area as a regional wildlife corridor. Increased stress from these factors may also potentially affect the individual fitness of resident species within the riparian habitat. However, plans for open-span bridges to allow for movement under the alignment plus wildlife directional fencing and road undercrossings may decrease these impacts.

The Southern Alignment Alternative would have approximately 121.58 acres of permanent impacts to the PAMA, 70.07 acres of temporary impacts, and approximately 260.0 acres of indirect impacts (Figure 3.20-4).

No Build Alternative

The No Build Alternative would not result in impacts to regional or local wildlife corridors above the existing baseline.

3.20.3 Avoidance, Minimization, and/or Mitigation Measures

Measures proposed in the Biological Opinion (Appendix K) for the SR-76 South Mission to I-15 Highway Improvement Project include, but are not limited to, the following:

1. Upland, riparian and wetland vegetation would be avoided to the maximum extent practicable. Avoidance and minimization of impacts to vegetation has been accomplished through design considerations, including elevated road beds instead of fill, and fill slopes would be at 2:1 or flatter instead of the advisory design standard of 4:1.
2. Sensitive vegetation outside the alignment footprint shall be designated an environmentally sensitive area (ESA) and depicted as such on project maps and plans. No personnel or equipment would be allowed within these areas at any time. Sensitive vegetation areas may be marked and protected by temporary fencing (e.g., orange plastic snow fencing) or another appropriate method to prevent encroachment or unnecessary disturbance to the sites. Prior to and during construction, barriers would be established in key areas to deter public entry into the site. Additionally, temporary fencing would be provided to restrict access to sensitive vegetation adjoining the work limits.
3. Any graded habitat (e.g., slopes, right-of-way) adjacent to the San Luis Rey River corridor would be revegetated with an appropriate native plant mix. The proposed seed palette would be reviewed and approved by a qualified biologist prior to application in the field. The best methods of revegetation would be determined during design and could include duff, hydroseeding, planting, and/or possibly temporary irrigation.
4. Revegetation with native plant species would occur as early as possible following grading (where applicable), and be accompanied with periodic monitoring and maintenance to ensure adequate coverage, and prevent erosion and siltation into adjacent biologically sensitive areas.
5. The changing of oil, refueling, and other actions that could result in a release of a hazardous substance would be restricted to designated areas that are a minimum of 100 feet from any sensitive plant populations, sensitive habitats, or drainages. Such designated areas would be surrounded with berms, sandbags, or other barriers to further prevent the accidental spill of fuel, oil, or chemicals.
6. Temporary disturbance to upland and riparian habitats within the project area would be offset through native revegetation of the area (1:1 ratio) upon completion of construction. All seeding/planting would occur on-site within the temporarily disturbed habitat and involve replacement with in-kind/similar native species, to the maximum extent practicable, or with alternative native vegetation, in locations where exotics were previously established.
7. Storage and staging areas would be placed as far from sensitive habitat as possible and kept free from trash and other waste. Staging areas for construction work would be located within previously disturbed sites and not adjacent to or within sensitive habitat.
8. Construction dust impacts would be offset through implementation of Caltrans Standard Specifications, including Section 7-1.01F Air Pollution Control, Section 10 Dust Control, Section 17 Watering, and Section 18 Dust Palliative. The project biologist would also periodically monitor the work area to ensure that construction-related activities do not generate excessive amounts of dust or cause other disturbances. Erosion-control

measures would be regularly checked by Caltrans inspectors, the biologist, or the resident engineer.

9. Best management practices (BMPs) to address erosion and excess sedimentation would be incorporated into the project plans. Measures that would be implemented during construction include silt fencing, gravel bags, hay bales, fiber rolls, and protection/velocity dissipation at drainage outlet points. Vegetation filters such as swales or biostrips may also be used to remove sediment and other contaminants from runoff prior to off-site flow. Measures that would be implemented after construction include plantings, retaining walls, and slope stabilization techniques. BMPs employed during construction would follow the applicable Caltrans guidelines and be detailed in the project's Storm Water Management Plan (SWMP), Storm Water Pollution Prevention Plan (SWPPP), and Water Pollution Control Program (WPCP).

Mitigation of Impacts to Riparian and Wetland Vegetation

Potential mitigation sites for riparian and wetland communities are proposed at three locations (Figure 3.20-5) (mitigation ratios for wetland and riparian vegetation impacts are addressed in Table 3.20-2, and in Section 3.21, Wetlands and Other Waters). The 33.75-acre Tabata property is located adjacent to the SR-76 Melrose to South Mission Highway Improvement Project footprint, south of SR-76 and east of Camino Del Rey. The parcel is bordered to the south by the San Luis Rey River. Two other waterways pass through this property: Bonsall Creek to the west and Ostrich Creek to the east. The majority of the parcel is southern cottonwood-willow riparian forest habitat. Additional areas include disturbed habitat and an abandoned agricultural field. The riparian area is degraded by arundo and tamarisk. Of the 33.75-acre parcel, approximately 7.3 acres of riparian forest would be created and 15.4 acres of riparian forest would be restored. The remaining 11.1 acres of the parcel would be used to build a portion of the SR-76 Melrose to South Mission Highway Improvement Project. The goal for this site is to restore the site to high-quality least Bell's vireo, southwestern willow flycatcher, and arroyo toad habitat. This creation and restoration plan includes removal of exotic species on the entire site. The restoration areas would be planted with cottonwood, willows, sycamore, mulefat, and other riparian species to fill in gaps where exotics have been removed. The creation areas would be graded down to within a few feet of groundwater level, and be planted with riparian species including sycamore, cottonwood, willows, saltgrass, spike rush, and mulefat. Irrigation would be used for the first 3 years to establish vegetation.

The Vessels Stallion Farm is located along the south side of the San Luis Rey River, south of SR-76 and approximately 1.75 miles west of I-15. An unnamed drainage flows southeast to northwest through the site, ending in ponds along the southern boundary. The majority of the site is nonnative grassland habitat (98.6 acres) and disturbed habitat (16.2 acres). There are approximately 22.9 acres of riparian habitat in the form of southern cottonwood-willow scrub, southern cottonwood-willow riparian forest, mulefat scrub, southern willow scrub, and open water. Sections of these riparian habitats are disturbed and degraded by giant reed and tamarisk. The Vessels parcel presently supports a population of least Bell's vireo along the northern edge of the property.

The 162-acre Vessels Ranch Biological Mitigation Site has approximately 87.7 acres available for riparian creation, 22.9 acres available for riparian restoration and enhancement, and 49.4 acres for upland restoration and enhancement. The excess fill generated from grading the site to create riparian habitat would be used on the SR-76 South Mission to I-15 Highway Project. The Vessels grading plan proposes to remove existing soil from within the San Luis Rey River

100-year floodplain. The exact amount of material to be removed from the location is not known at this time. The final configuration of the mitigation site would be designed in accordance with the guidelines in the Standard Environmental Reference Chapter 17, Floodplains. Removal of material from the floodplain would be done in a manner as to avoid impacting the river dynamics in any way that would cause damage to properties upstream or downstream of the proposed site.

The Jeffries Ranch property is located along the south side SR-76 between Melrose Drive and East Vista Way. This property has approximately 2 acres of riparian forest and scrub, 56 acres of coastal sage scrub, 9 acres of coast live oak woodland, and 41 acres of nonnative grassland. These habitats would be restored or preserved.

Another property being investigated for potential project mitigation is located northwest of the community of Valley Center, and approximately 5 miles south of the San Luis Rey River. The property is approximately 850 acres. Tributaries to the San Luis Rey River occur on site, which includes approximately 150 acres of riparian areas, with 10 acres of streambeds, wetlands, and open water. Sensitive vegetation communities within the property include riparian forest, riparian scrub, freshwater marsh, emergent wetland, coast live oak woodland, coastal sage scrub, and southern mixed chaparral. This area is part of a regional wildlife corridor that connects areas of high-quality habitat to the San Luis Rey River. Detections of sensitive species on-site include least Bell's vireo (*Vireo bellii pusillus*), and coastal California gnatcatcher (*Polioptila californica californica*). Potential mitigation includes restoration of riparian forest and riparian scrub, and preservation of coast live oak woodland, coastal sage scrub, chaparral, and nonnative grassland.

Mitigation for Upland Vegetation

The ratios listed in Tables 3.20-3, 3.20-4, and 3.20-5 provide the anticipated mitigation for the permanent upland vegetation impacts. Temporary impacts would be mitigated on-site at a 1:1 ratio. Mitigation requirements are detailed in the USFWS Biological Opinion for this project (Appendix K).

Caltrans has acquired or is in the process of acquiring properties along SR-76 and within the San Luis Rey watershed as potential mitigation sites for impacts resulting from proposed projects (Figure 3.20-5). The mitigation sites have been identified in regional planning efforts as important to the conservation of sensitive species and to the buildout of the preserve within the Draft NCMSCP and City of Oceanside Subarea Plan within the Multiple Habitat Conservation Plan (MHCP) area.

Table 3.20-3. Proposed Mitigation Ratios for Upland Vegetation

Vegetation Communities and Cover Types	Ratios for Impacts
Upland	
Coast Live Oak Woodland	2:1
Diegan Coastal Sage Scrub	2:1
Disturbed Diegan Coastal Sage Scrub	2:1
Nonnative Grassland	0.5:1; 1:1 for toad habitat

Table 3.20-4. Mitigation Proposal for Permanent Impacts to Upland Vegetation, Existing Alignment Alternative (Preferred Alternative)

Habitat Type	Permanent Impacts (acres)	Mitigation Ratio	Total Compensation (acres)	Mitigation Location and Available Acres
Coast Live Oak Woodland	2.09	2:1	4.18	Groves 2.51* Vessels 3.03*
Coastal Sage Scrub	0.54	2:1	1.08	Groves 55.89
Disturbed Coastal Sage Scrub	6.35	2:1	12.7	Groves 55.89
Nonnative grassland	27.14	1:1 toad habitat; 0.5:1 other	23.61 at 1:1; 3.53 at 0.5:1 = 25.38 total	Groves 12.69 Vessels 46.37

* Groves 2.51 acres of preservation; Vessels 3.03 of creation

Table 3.20-5. Mitigation Proposal for Permanent Impacts to Upland Vegetation, Southern Alignment Alternative

Habitat Type	Permanent Impacts (acres)	Mitigation Ratio	Total Compensation (acres)	Mitigation Location and Available Acres
Coast Live Oak Woodland	1.78	2:1	3.56	Groves 2.51* Vessels 3.03*
Diegan Coastal Sage Scrub	0.21	2:1	0.42	Groves 55.89
Disturbed Coastal Sage Scrub	6.16	2:1	12.32	Groves 55.89
Nonnative grassland	25.13	1:1 toad habitat; 0.5:1 other	21.6 at 1:1; 3.53 at 0.5:1 = 23.37 total	Groves 12.69 Vessels 46.37

* Groves 2.51 acres of preservation; Vessels 3.03 of creation

The Groves property is located at the southwest corner of SR-76 and Olive Hill Road in the community of Bonsall. This site is entirely composed of upland vegetation types. A majority of the area contains designated critical habitat for the threatened coastal California gnatcatcher. Approximately 55.87 acres of coastal sage scrub occurs on-site. This property also consists of about 9.67 acres of coast live oak woodland and 12.69 acres of nonnative grassland. The site would be preserved in perpetuity and would have controlled access.

The 162-acre Vessels property addressed in mitigation for impacts to riparian and wetland vegetation communities has approximately 160 acres available for mitigation purposes.

Mitigation of Impacts to Local and Regional Wildlife Corridors

Design measures for either alternative would be applied to ensure that wildlife movement is not adversely affected and that road mortality is minimized. Wildlife crossings beneath the roadways would permit movement between habitats. Their design would provide suitable environmental conditions (soil, vegetation, lighting, and height/width) to encourage use. Such crossings would include directional fencing and be located where natural landscape and habitat indicate probable directional wildlife movement. Drainage structures would be used as undercrossings and suitably designed. Additionally, movement of wildlife across roadways would be discouraged where suitable habitat does not exist on the other side (Figures 3.20-6a and 6b). Wildlife would be directed to areas identified in the Draft NCMSCP as PAMAs and to the San Luis Rey River Park. Wildlife would not be directed into developed areas. A complete list of all avoidance, minimization, and/or mitigation measures that will be implemented for impacts to wildlife corridors is included in the USFWS Biological Opinion for this project (Appendix K).

Measures proposed in the Biological Opinion (Appendix K) for the SR-76 South Mission to I-15 Highway Improvement Project include, but are not limited to, the following:

Existing Alignment Alternative (Preferred Alternative)

1. Directional fencing extending the length of the alignment on the south side of the alignment shall be put in place. Directional fencing on the north side of the Existing Alignment Alternative (Preferred Alternative) would be placed from Flowerwood Road to the east. The fence shall be made of chain-link and be 10 feet in total height, 8 feet above the ground, and 2 feet buried beneath the ground to discourage burrowing and digging animals from crossing. A fine mesh lining shall be attached to the 2 feet of buried fencing and the lower 2 feet of fencing above the ground to prevent small animals, including arroyo toad, from moving through the chain-link. At each driveway entrance or road intersection where fencing stops, it is recommended that the fence extend 30 feet up the driveway or road away from SR-76 and angle away from the intersection. This would deter wildlife from being funneled to the intersections to cross.
2. The size of proposed crossing structures varies by the relative size of focal species. Four sizes of underpasses have been recommended by the Wildlife Movement Study; the number of structures vary depending on length of the alignment alternative, location of the alternative within PAMA or park areas, and road design. Approximately 16 crossing structures are proposed for the Southern Alignment Alternative, including one bridge at Live Oak Creek. However, the numbers of crossings are subject to change, pending recommendations from the resource agencies.
    - Large underpasses are proposed per the drainage design and would be modified to increase the likelihood of wildlife usage (ideal minimum dimension is 10 by 10 feet). Others may be designed solely for wildlife use. This size of underpass would likely be effective for all size classes of focal species.
    - Medium underpasses (ideal dimension 5 by 5 feet) are proposed depending on drainage design and would be improved to increase wildlife usage. Others are proposed solely for wildlife. These underpasses shall be improved or designed specifically for bobcats and coyotes, and shall accommodate smaller focal species as well.
    - Small underpasses (minimum 3 feet in diameter, maximum 5 feet) are proposed to allow small mammal species access to riparian resources to the south and upland resources to the north of the proposed Southern Alignment Alternative. These underpasses are pipe culverts proposed for drainage that shall be modified with shelves and access ramps to increase wildlife use, particularly during times when there is water present in the culverts.
    - Small underpasses (minimum 2 by 2 feet) are proposed for herptofauna movement. These underpasses shall be intended for wildlife crossing and drainage.

Southern Alignment Alternative

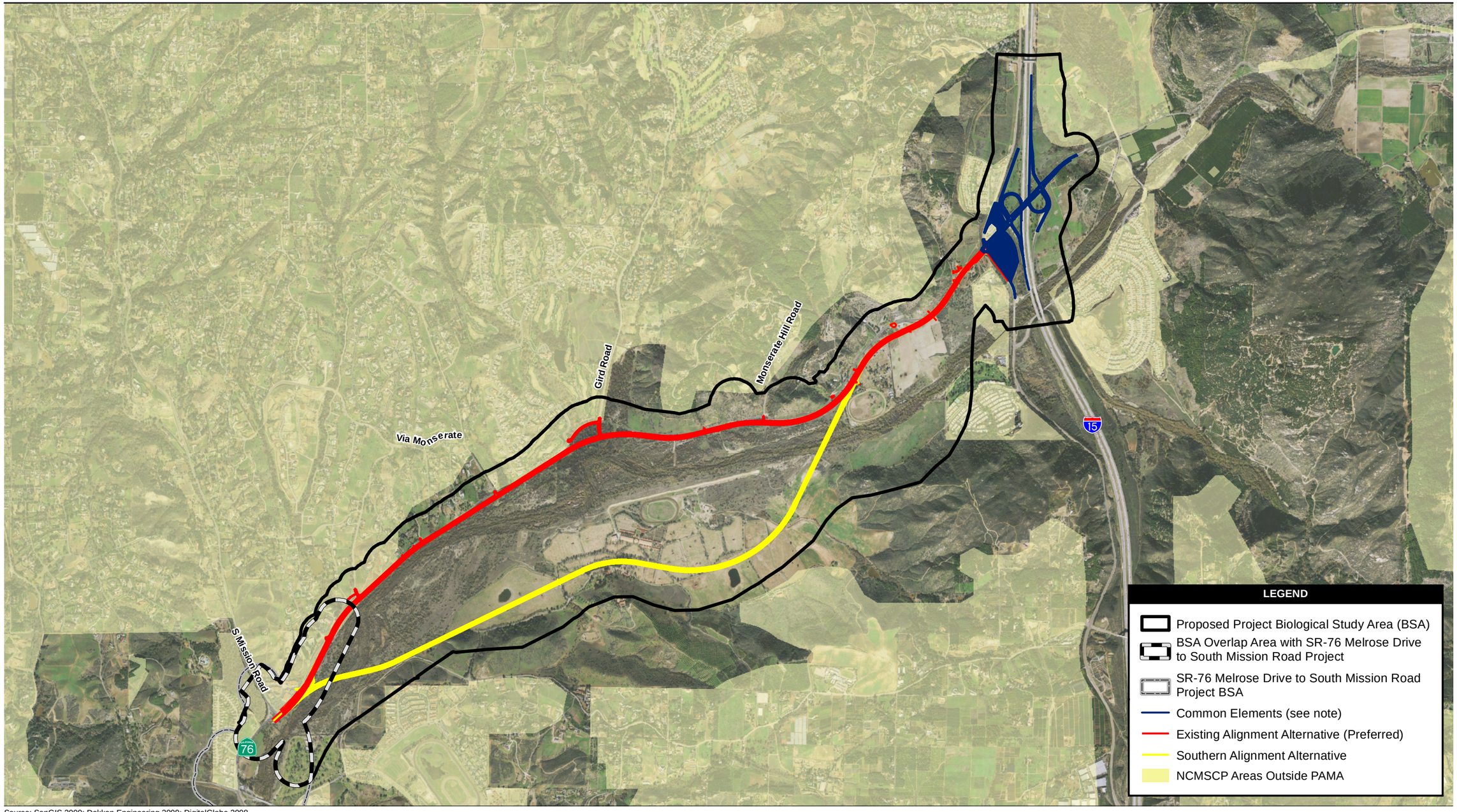
1. Directional fencing extending the length of the alignment on both sides of the alignment shall be put in place. The fence shall be made of chain-link and be 10 feet in total height, 8 feet above the ground, and 2 feet buried beneath the ground to discourage

burrowing and digging animals from crossing. A fine mesh lining shall be attached to the 2 feet of buried fencing and the lower 2 feet of fencing above the ground to prevent small animals, including arroyo toad, from moving through the chain-link. At each driveway entrance or road intersection where fencing stops, it is recommended that the fence extend 30 feet up the driveway or road away from SR-76 and angle away from the intersection. This would deter wildlife from being funneled to the intersections to cross.

2. The size of proposed crossing structures varies by the relative size of focal species. Four sizes of underpasses have been recommended by the Wildlife Movement Study; the number of structures vary depending on length of the alignment alternative, location of the alternative within PAMA or park areas, and road design. A total of 23 crossing structures are proposed for the Existing Alignment Alternative (Preferred Alternative), including two bridges which cross the San Luis Rey River:

   - Large underpasses are proposed per the drainage design and would be modified to increase the likelihood of wildlife usage (ideal minimum dimension is 10 by 10 feet). Others may be designed solely for wildlife use. This size of underpass would likely be effective for all size classes of focal species.
   - Medium underpasses (ideal dimension 5 by 5 feet) are proposed depending on drainage design and would be improved to increase wildlife usage. Others are proposed solely for wildlife. These underpasses shall be improved or designed specifically for bobcats and coyotes, and shall accommodate smaller focal species as well.
   - Small underpasses (minimum 3 feet in diameter, maximum 5 feet) are proposed to allow small mammal species access to riparian resources to the south and upland resources to the north of the proposed Existing Alignment Alternative (Preferred Alternative). These underpasses are pipe culverts proposed for drainage that shall be modified with shelves and access ramps to increase wildlife use, particularly during times when there is water present in the culverts.
   - Small underpasses (minimum 2 by 2 feet) are proposed designed specifically for herptofauna, to include arroyo toads. These underpasses shall be intended for wildlife crossing, specifically arroyo toads, not drainage.

   If the Southern Alignment Alternative is implemented, it is unknown if the County would provide wildlife crossings on the current SR-76 highway. If the Southern Alignment Alternative is implemented, the net benefit to wildlife movement would be two bridges at the river crossings (allowing east/west wildlife movement within the riparian area), and wildlife fencing and crossings in the form of culverts along the southern alignment (allowing north/south movement).



Source: SanGIS 2009; Dokken Engineering 2009; DigitalGlobe 2008

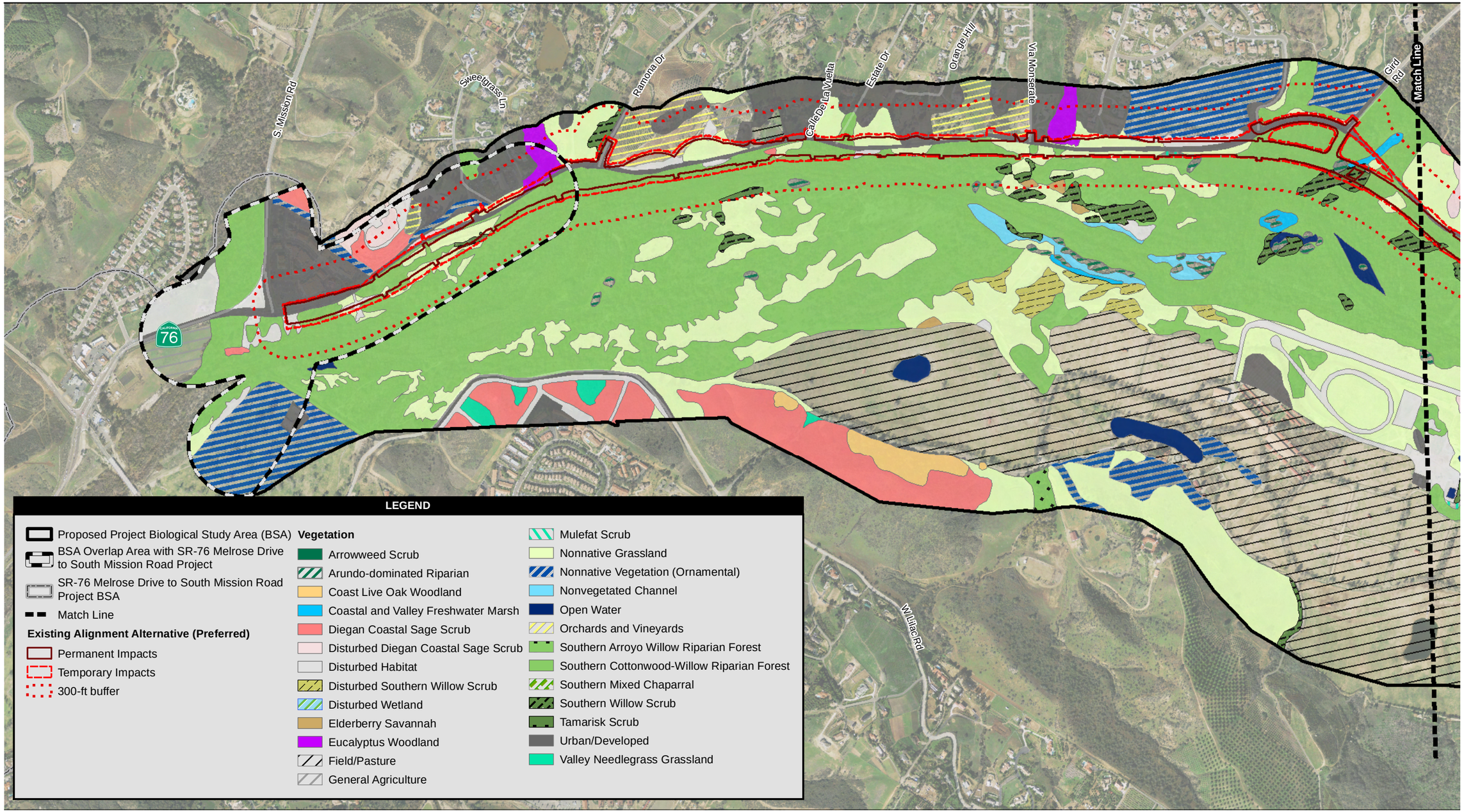
2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.20-1
Biological Study Area

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_1_BiologicalSurveyArea.mxd, 10/11/2011, augellop



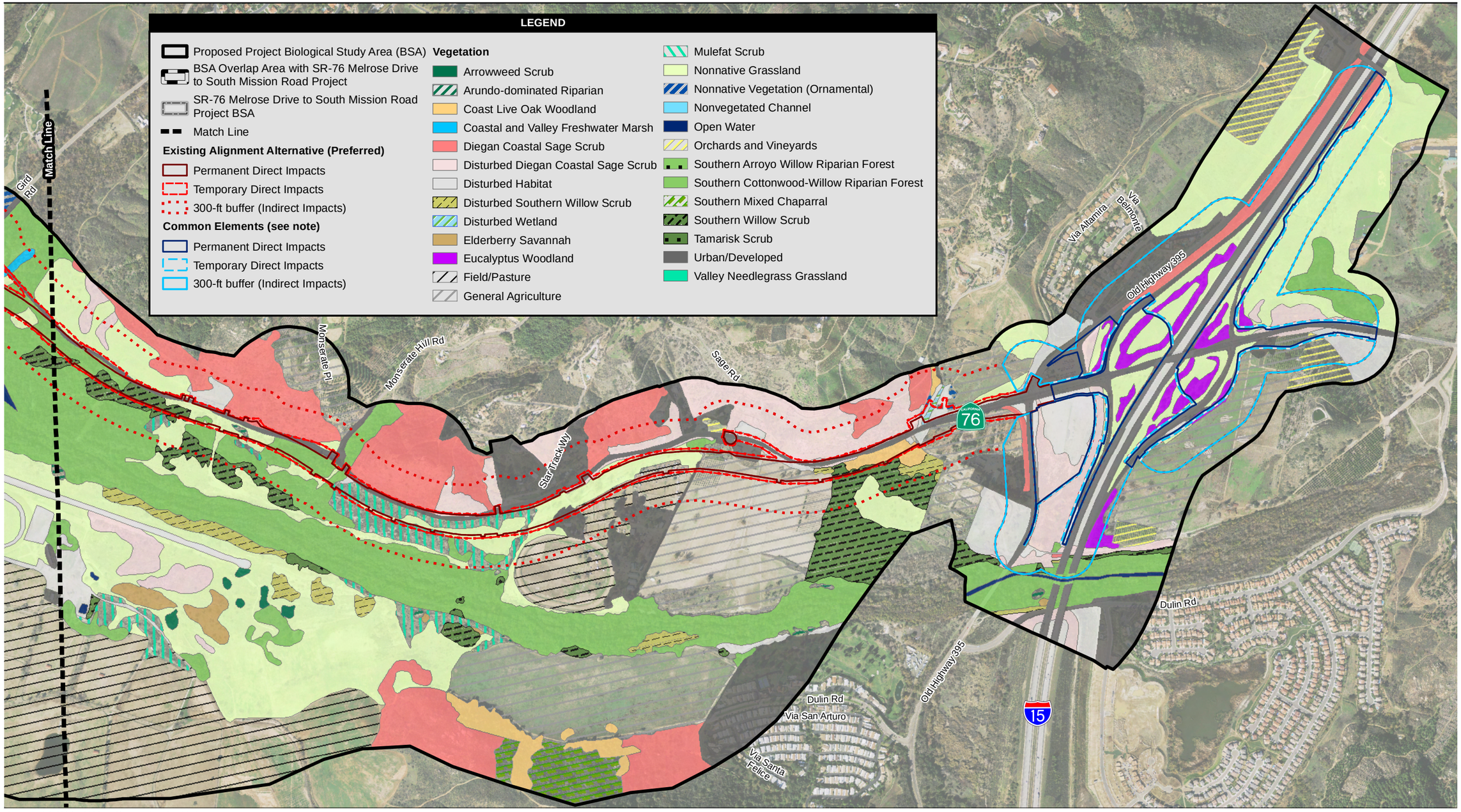
Source: DigitalGlobe 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.20-2a
Vegetation Communities - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_2a_veg_Existing_WEST.mxd, 10/9/2011, augellop



Source: DigitalGlobe 2008; Dokken Engineering 2010

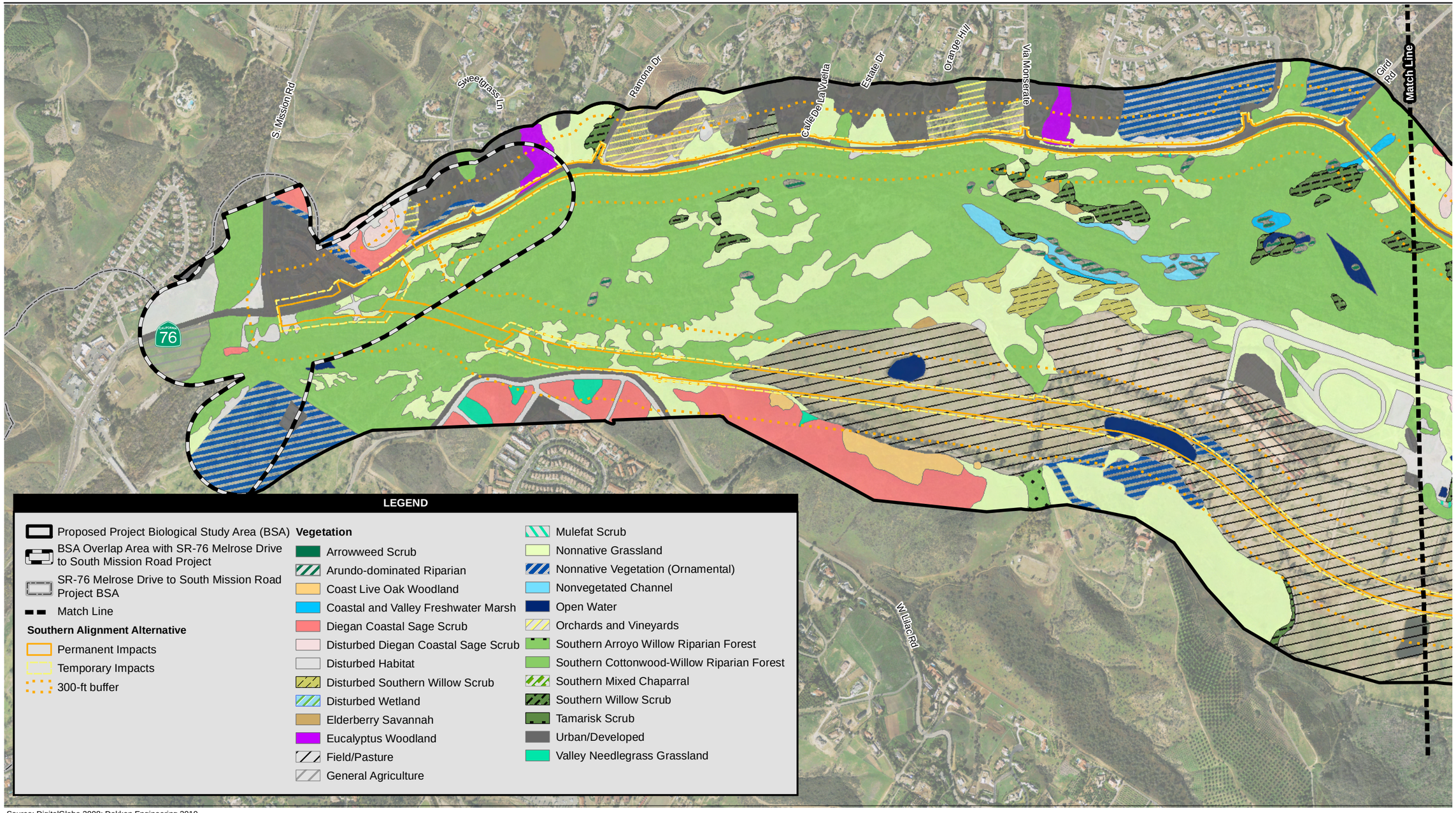
1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.20-2b
Vegetation Communities - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_2b_veg_Existing_EAST.mxd, 10/7/2011, augellop



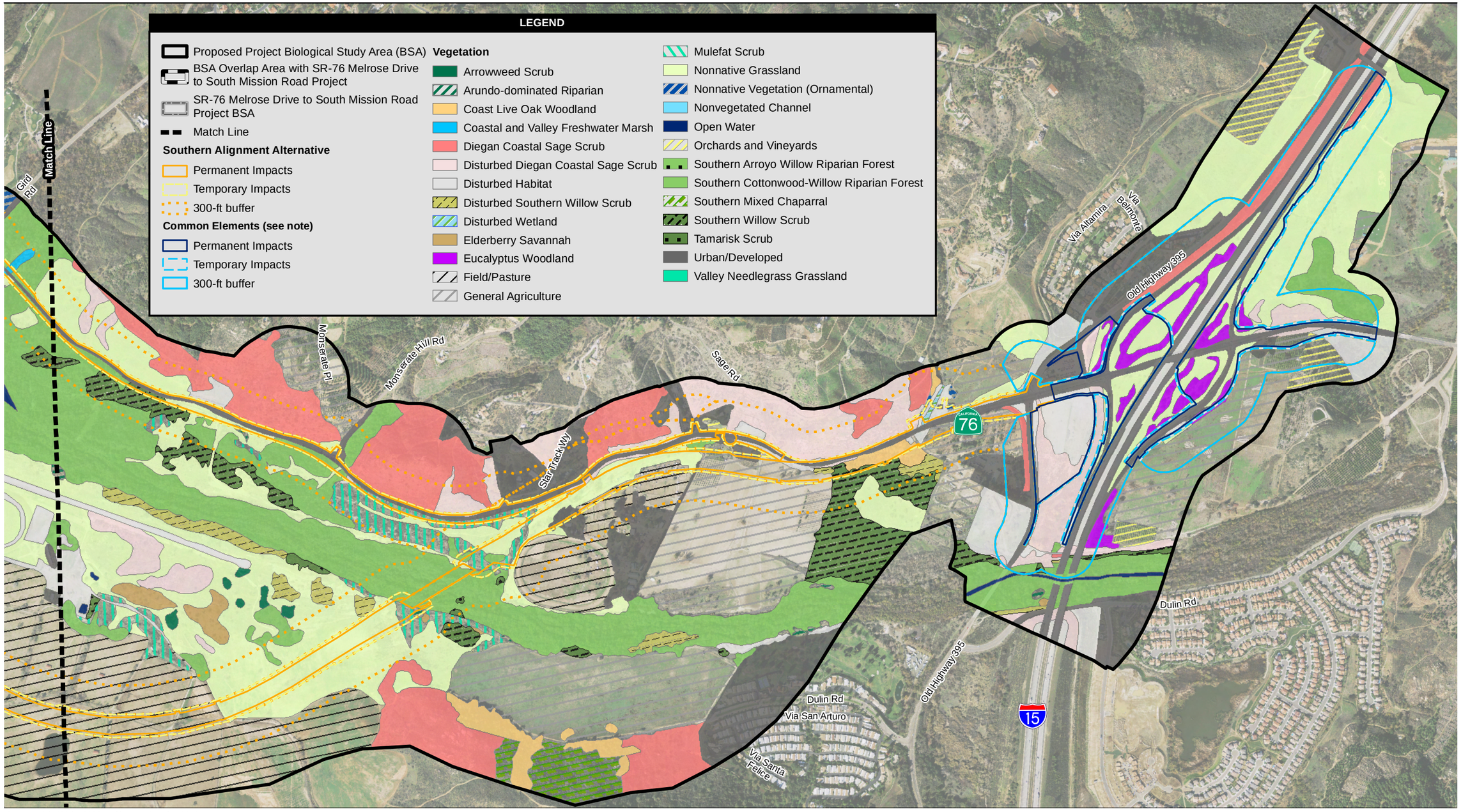
Source: DigitalGlobe 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.20-3a
Vegetation Communities - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_3a_veg_Southern_WEST.mxd, 10/9/2011, augellop



Source: DigitalGlobe 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.20-3b
Vegetation Communities - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_3b_veg_Southern_EAST.mxd, 10/7/2011, augellop

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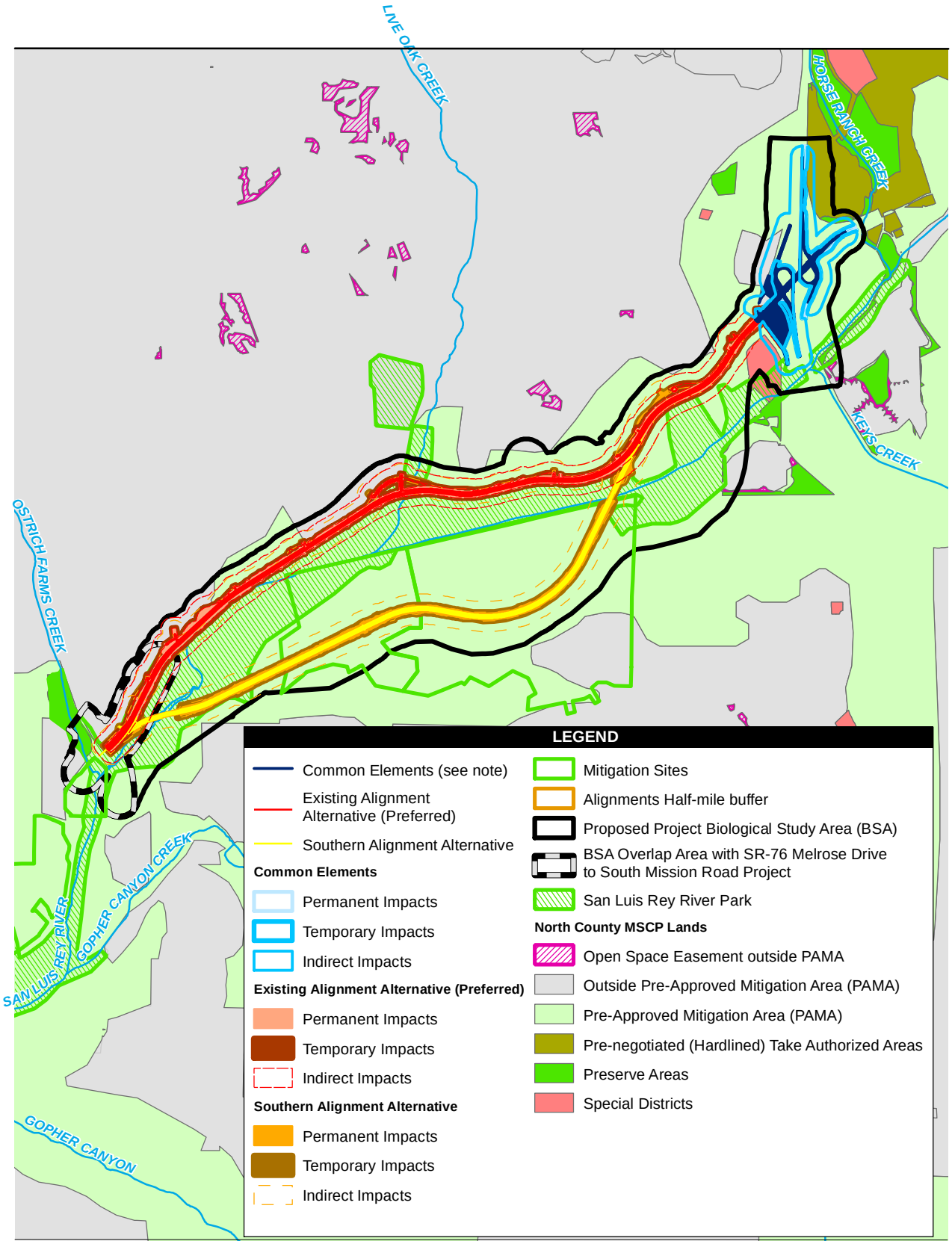

Source: SANGIS 2009; Dokken Engineering 2010

4,000 2,000 0 4,000 Feet

Scale: 1 = 48,000; 1 inch = 4,000 feet

Figure 3.20-4
Wildlife Corridor Impacts

SR-76 South Mission Road to Interstate 15 – Highway Improvement Project

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_5_PAMA_Impacts.mxd, 12/28/2011, leej

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

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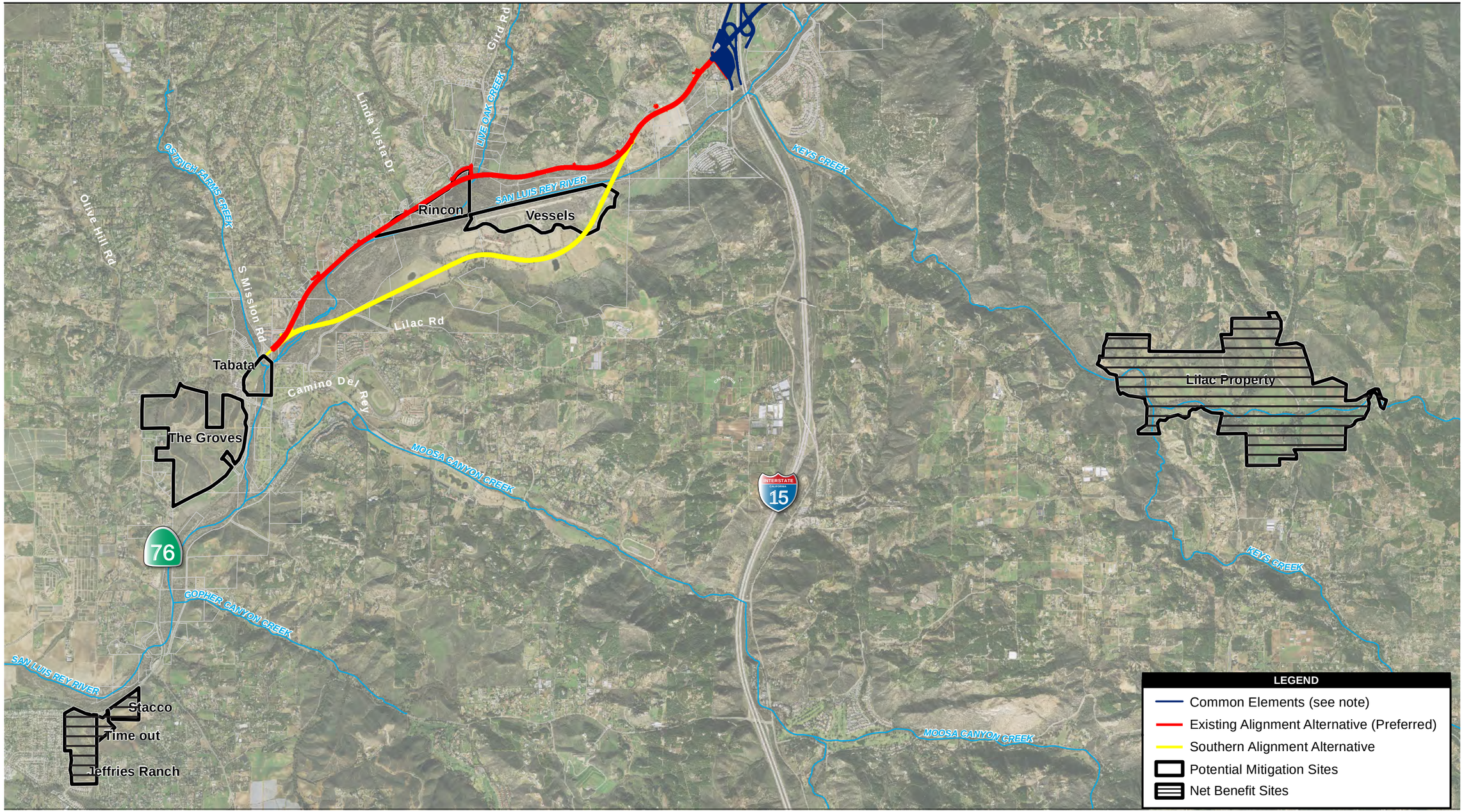

Source: DigitalGlobe 2008; SANGIS 2009; Dokken Engineering 2010

4,000 2,000 0 4,000 Feet

Scale: 1 = 48,000; 1 inch = 4,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.20-5
Potential Mitigation Site Locations

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_5_Potential_Mitigation_Sites_Location.mxd, 10/21/2011, augellop

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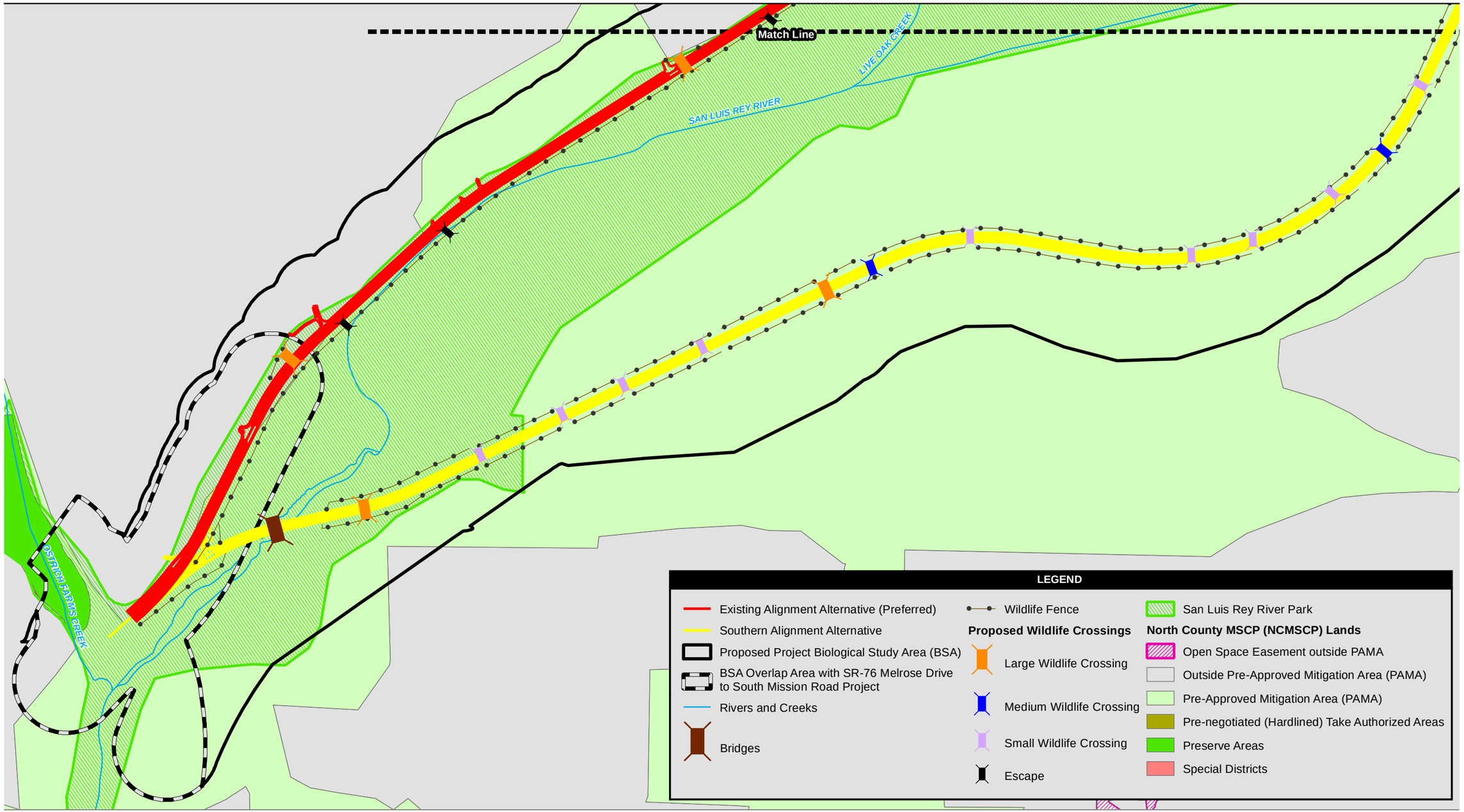


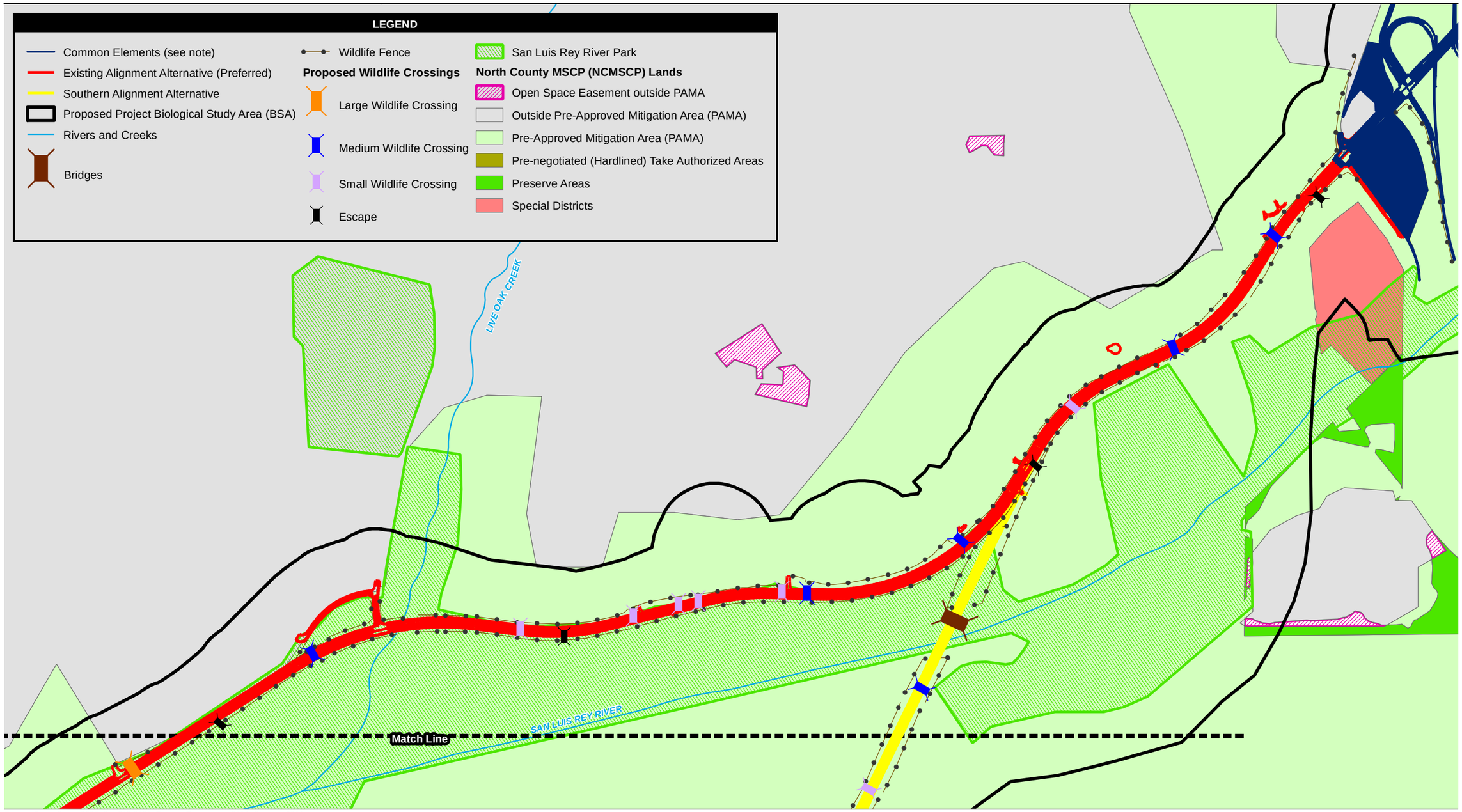
Source: DigitalGlobe 2008; SanGIS 2008; Dokken Engineering 2010; Caltrans 2011

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.20-6a
Wildlife Crossings and Fencing

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_20_6a_WildlifeFence.mxd, 10/10/2011, augellop



Source: DigitalGlobe 2008; SanGIS 2008; Dokken Engineering 2010; Caltrans 2011

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.20-6b
Wildlife Crossings and Fencing

3.21 WETLANDS AND OTHER WATERS

3.21.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act [CWA (33 USC 1344)], is the primary law regulating wetlands and surface waters. The CWA regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. 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 formed during 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 discharge of dredged or fill material cannot 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 USACE with oversight by USEPA.

USACE issues two types of 404 permits: Standard and General permits. Nationwide permits, a type of General permit, are issued to authorize a variety of minor project activities with no more than minimal effects. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with USEPA's Section 404(b)(1) Guidelines (USEPA 40 CFR Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by USEPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have fewer effects on waters of the U.S., and not have any other significant adverse environmental consequences.

Caltrans, FHWA, USACE, USEPA, and USFWS entered into an MOU to integrate NEPA and the CWA for EIS projects that have 5 or more acres of permanent impact to waters of the U.S. Under this MOU, the signatory agencies agree to coordinate at three checkpoints: (1) purpose and need, (2) identification of range of alternatives, and (3) preliminary determination of the LEDPA and conceptual mitigation plan. The goal of the MOU process is to allow USACE to more efficiently adopt the EIS for their Section 404 permit action.

Executive Order 11990 for the Protection of Wetlands also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds (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 CDFG, the SWRCB, and the RWQCBs. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600–1607 of the California 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 would 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 USACE jurisdiction may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFG.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the CWA. See Section 3.14, Water Quality and Storm Water Runoff for additional details.

3.21.2 Affected Environment

Reports conducted for the wetland and waters analysis have included the following:

- 2007. State Route 76 Melrose Drive to South Mission Road Jurisdictional Delineation Report for Waters of the U.S. and State of California.
- 2008. State Route 76 South Mission Road to Interstate 15 Jurisdictional Delineation Report for Waters of the U.S. and State of California.

Delineation of jurisdictional wetlands and an evaluation of waters potentially under USACE, CDFG, and/or RWQCB jurisdiction were performed within the project footprint (i.e., construction limits for both the proposed Existing Alignment Alternative (Preferred Alternative) and the proposed Southern Alignment Alternative) and the segment of the San Luis Rey River floodplain between these two alignments. The delineation study area also included the SR-76/I-15 interchange, the area under the I-15 bridge where it crosses the San Luis Rey River, and 200 feet west of the bridge. The jurisdictional delineation study area did not include the 156-acre overlap area with the SR-76 Melrose Drive to South Mission Road Highway Improvement Project. During these delineations, riparian and other wetland vegetation mapping was also performed. Completion dates of delineations are as follows: 3/1/07, 3/2/07, 3/3/07, 3/20/07, 3/28/07, 3/29/07, 4/12/07, 4/19/07, 4/25/07, 5/1/07, 5/2/07, 5/4/07, 5/7/07, 7/14/08, and 7/17/08.

Riparian and wetland vegetation communities within the study area are associated with the San Luis Rey River, Live Oak Creek, and unnamed drainage features that traverse the survey area, and, to a lesser extent, drainage features and seeps resulting from municipal separate storm water sewer system facilities, irrigation, and roadway runoff.

Approximately 240 acres of potential jurisdictional waters of the U.S., which are also under jurisdiction of the state, and an additional 364 acres that are only state jurisdictional occur within the survey area, for a total area of 604 acres of regulated waters (Table 3.21-1; Figures 3.21-1a through 3.21-2b).

Table 3.21-1. Jurisdictional Waters of the U.S. and State in the Form of Aquatic Habitat Occurring within the Survey Area[a]

Type of Jurisdictional Waters	Type of Habitat	Area of Aquatic Resource (acres)[b]
USACE and CDFG Jurisdictional Waters – Federally and State Regulated		
Wetland	Coastal and Valley Freshwater Marsh	9.64
Wetland	Disturbed Wetland (Arundo Scrub)	5.06
Wetland	Mulefat Scrub	0.50
Wetland	Southern Cottonwood-Willow Riparian Forest	159.26
Wetland	Southern Riparian Scrub	43.35
Wetland	Southern Willow Scrub	11.13
Other Waters (Unvegetated Water)	Open Water	10.47
Other Waters (OHWM[c])	Nonvegetated Channel (Drainage Features	0.48
	Total USACE and CDFG Waters	**239.89**
CDFG Jurisdictional Waters – State Regulated Only		
Wetland	Coastal and Valley Freshwater Marsh	0.65
Wetland	Disturbed Wetland (Arundo Scrub)	2.56
Wetland	Mulefat Scrub	21.91
Wetland	Nonnative Grassland	1.83
Wetland	Southern Cottonwood-Willow Riparian Forest	271.96
Wetland	Southern Riparian Scrub	11.91
Wetland	Southern Willow Scrub	46.45
Other Waters (Unvegetated Water)	Open Water	6.84
	Total CDFG Only Waters	**364.11**
	Total CDFG Waters	**604.00**

[a] At the time of writing the Jurisdictional Delineation Report, no formal jurisdictional determination for delineated waters had been undertaken by USACE to confirm that that agency will assert jurisdiction. The total area of federally regulated waters may change after the formal jurisdictional determination process.
[b] All acreages are rounded to the nearest hundredth after summing.
[c] OHWM = ordinary high water mark

Federal Jurisdictional Areas

Wetlands

Wetland vegetation communities existing within USACE jurisdiction are considered “special aquatic sites” by USACE. The jurisdictional waters of the U.S. within the study area are depicted in Figures 3.21-1a through 3.21-2b. The wetland habitats were classified according to a common classification scheme. Hydrophytic vegetation is dominant within the wetland areas and other jurisdictional waters of the U.S. The hydrophytic vegetation occurring within the study area is vegetation typically associated with wetlands and riparian habitat occurring within this region of California. Wetlands were located primarily within southern cottonwood-willow riparian forest, disturbed wetland (arundo scrub), and coastal and valley freshwater marsh vegetation communities.

Unvegetated Waters

Unvegetated waters of the U.S. are regulated by USACE and include territorial seas, tidal waters, and nontidal waters. Open water and unvegetated channels within the project area are associated with active channels (perennial or seasonally moving water) and occasionally with wetland communities. Although not providing cover, unvegetated waters do provide habitat for a variety of wildlife species. On-site active channels occur within the San Luis Rey River and flow northeast to southwest and into the Pacific Ocean. Unvegetated waters were located within southern cottonwood-willow riparian forest.

Ordinary High Water Mark

USACE jurisdictional waters in the form of the ordinary high water mark, defined as the jurisdictional lateral extent of a river in a semiarid region, generally include hydrology and riparian vegetation. These were found to occur predominantly within the 10-year flood extent. Jurisdictional streams were identified as those having defined bed and bank, and evidence of fluvial scour and deposition within the last 10 years of normal climactic conditions. Swales vegetated with upland vegetation and/or lacking a defined bed and bank were not generally considered jurisdictional if they were outside the normal 10-year flood extent.

The ordinary high water marks of jurisdictional streams in the study area were identified based on evidence of scour; deposition; the type, abundance, and relative age of vegetation; and other geomorphic evidence indicative of regular or “bankfull” flow levels within the last 10 years. The normal climactic conditions were obtained by using the relevant USACE protocol. Ordinary high water marks were scattered throughout vegetation types, including southern cottonwood-willow riparian forest, southern willow scrub, and some developed areas.

State Jurisdictional Areas

California Department of Fish and Game

In addition to the jurisdictional waters of the U.S., the project area also includes jurisdictional waters of the state, which are regulated by CDFG. The jurisdictional waters of the state within the project area are depicted in Figures 3.21-1a through 3.21-2b. The difference between the two jurisdictional areas results from the methodology of jurisdictional determination. Areas under the jurisdiction of CDFG include the areas of USACE jurisdictional nonwetland waters of the U.S. and wetlands, as well as non-USACE jurisdictional riparian habitat. In practice, CDFG jurisdiction extends to the limits of the riparian canopy or from the top of a bank on one side of a stream to the corresponding top of the opposite bank. CDFG jurisdiction within the project study area is mapped to the edge of the riparian canopy. Because of the nature of the riverine system within the study area, the riparian canopy extends beyond the normal banks of the watercourses. In these areas, the limits of CDFG jurisdiction were delineated to the contiguous edges of the native riparian habitat.

CDFG jurisdiction can include coastal and valley freshwater marsh, disturbed wetlands, mulefat scrub, nonnative grassland (wet meadows), southern cottonwood-willow riparian forest, southern riparian scrub, southern willow scrub, and open water.

Regional Water Quality Control Board

Areas within the jurisdiction of the RWQCB are considered to be the same as areas within the jurisdiction of USACE, with the possible exception of several isolated patches of southern willow scrub and mulefat scrub near and along the proposed project. These isolated wetland areas may be subject to regulation pursuant to the Porter-Cologne Water Quality Act.

Riparian and wetland vegetation communities observed and documented within the survey area include coastal and valley freshwater marsh, disturbed wetland (arundo scrub), mulefat scrub, southern cottonwood-willow riparian forest, southern riparian scrub, and southern willow scrub. Detailed descriptions of these vegetation communities can be found in Section 3.20, Natural Communities. Additional unvegetated portions of the San Luis Rey River channel, including

sand washes and berms, are included as jurisdictional waters. Table 3.21-1 highlights the jurisdictional waters that are also regulated as streambed habitats by CDFG.

As outlined above, the survey area boundaries for jurisdictional delineations differ from those of the BSA as described in Section 3.20. It should also be noted that portions of a riparian vegetation community may or may not be considered jurisdictional, as vegetation only composes one parameter for evaluating potential jurisdictional waters. For these reasons, acreages for wetland vegetation communities presented within the context of potential jurisdictional waters do not coincide with the BSA-wide acreage totals for riparian and wetland vegetation communities summarized in Section 3.20.

3.21.3 Environmental Consequences

Impacts to riparian and wetland plant communities and jurisdictional waters of the U.S. have been avoided and reduced to the extent feasible through project design. Additional measures to further avoid and reduce impacts to these sensitive resources would be implemented during project construction and operation through the application of BMPs, as noted in Section 3.14. Unavoidable environmental consequences of the project to riparian and wetland communities, in addition to other waters of the U.S., would include both temporary and permanent impacts, as well as direct and indirect impacts.

The proposed project has the potential to result in the loss of jurisdictional waters of the U.S. and state (Table 3.21-2). Construction of either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative would result in permanent and temporary impacts to jurisdictional waters of the U.S. and state. Either alternative would also have permanent and temporary impacts to jurisdictional waters of the state only. Construction of the Existing Alignment Alternative (Preferred Alternative) would result in greater permanent impacts to jurisdictional waters. Construction of the Southern Alignment Alternative would result in greater indirect impacts to jurisdictional waters, which is attributable to the new alignment area, and bridge shading. This section provides specific descriptions and alignment-based comparisons of these impacts for each type of regulated water.

Existing Alignment Alternative (Preferred Alternative)

Within the Existing Alignment Alternative (Preferred Alternative) footprint, direct permanent impacts to jurisdictional waters would occur from ground disturbance (cut and fill) and bridge pilings. Direct permanent impacts would occur to 4.61 acres of waters of the U.S. and state, and 27.91 acres of waters under state jurisdiction only. A total of 32.52 acres of direct permanent impacts to jurisdictional waters would occur as a result of the Existing Alignment Alternative (Preferred Alternative). Direct temporary impacts within the Existing Alignment Alternative (Preferred Alternative) footprint include 3.99 acres of waters of the U.S. and state and 6.22 acres of waters of the state only. A total of 10.21 acres of direct temporary impacts to jurisdictional waters would occur as a result of the Existing Alignment Alternative (Preferred Alternative). The Existing Alignment Alternative (Preferred Alternative) would have approximately 102.2 acres of permanent impacts to the PAMA, 41.65 acres of temporary impacts, and approximately 151.0 acres of indirect impacts.

Table 3.21-2. Potential Direct Impacts to Jurisdictional Waters of the U.S. and State Occurring within the Alignment Alternatives (Acres)

Wetlands, Waters, and Other Aquatic Habitat	Existing Alignment Alternative (Preferred Alternative) [b]			Southern Alignment Alternative [b]		
	Permanent Impacts	Temporary Impacts	Indirect Impacts	Permanent Impacts	Temporary Impacts	Indirect Impacts
USACE and CDFG Jurisdictional Waters [a]						
Disturbed Wetland (Arundo Scrub)	0.10	0.01	0.18	0.00	0.00	0
Coastal and Valley Freshwater Marsh	0.00	0.00	0.01	0.00	0.00	0
Mulefat Scrub	0.00	0.00	0	0.05	0.00	0.12
Open Water (San Luis Rey River)	0.01	0.09	0	0.00	0.00	0
Southern Cottonwood-Willow Riparian Forest	2.51	3.18	7.33	0.11	0.52	24.8
Southern Riparian Scrub	0.00	0.02	0	0.04	0.31	0
Southern Willow Scrub	1.95	0.69	4.15	0.00	0.00	1.40
Unvegetated Channel/Drainage Feature (ordinary high water mark)	0.04	0.00	0	0.00	0.00	1.00
Subtotal USACE and CDFG	*4.61*	*3.99*	*11.75*	*0.20*	*0.82*	*27.32*
CDFG Jurisdictional Waters						
Disturbed Wetland (Arundo Scrub)	0.50	0.10	0	0.03	0.11	0.27
Coastal and Valley Freshwater Marsh	0.00	0.01	0	0.00	0.00	0
Mulefat Scrub	5.36	0.93	0	1.55	0.38	1.9
Nonnative Grassland (Mesic Meadow)	0.00	0.00	0.21	0.10	0.00	0.13
Open Water	0.00	0.00	0	3.67	0.30	0.87
Southern Cottonwood-Willow Riparian Forest	20.09	4.50	0	8.45	2.29	24.1
Southern Riparian Scrub	0.00	0.07	0	0.00	0.00	0.35
Southern Willow Scrub	1.96	0.62	0	0.74	0.27	0
Subtotal CDFG	*27.91*	*6.22*	*0.21*	*14.53*	*3.34*	*27.62*
Total	**32.52**	**10.21**	**11.96**	**14.73**	**4.17**	**54.94**

Note: Numbers may not sum exactly due to rounding.
[a] Portions of a riparian vegetation community may or may not be considered jurisdictional, as vegetation only composes one parameter for evaluating potential jurisdictional waters. For these reasons, acreages for wetland vegetation communities presented within jurisdictional waters may not coincide with the BSA-wide acreage totals for riparian and wetland vegetation communities (i.e., southern willow scrub was observed outside the floodplain of the San Luis Rey River).
[b] All acreages are rounded to the nearest hundredth after summing.

The Existing Alignment Alternative (Preferred Alternative) closely contours the San Luis Rey River between Ramona Road and Calle de la Vuelta. This could increase river channelization; however, the river would likely shift to the wide riparian areas and floodplain adjacent to and south of the river, precluding channelization. A bridge crossing over Live Oak Creek would be included with this alternative, which could alter temperature and flow in this tributary and other smaller drainages that the alignment would traverse, reducing aquatic habitat functions. However, the bridge span and pipe culverts planned for this area are designed to improve flow in comparison to the structures that are currently in place for the existing SR-76.

Impacts to wetlands from potential increases in human activity in the vicinity of SR-76 and runoff from new paved surfaces are expected to be minimal, because the project design would prevent access to the wetlands from the expanded bridges and road improvements, and a drainage plan would be implemented to divert and filter all roadway runoff into the storm drain system.

Southern Alignment Alternative

Within the Southern Alignment Alternative, direct permanent impacts to jurisdictional waters would occur from ground disturbance and placement of bridge pilings. Direct permanent impacts would occur to 0.20 acre of waters of the U.S. and state, and 14.53 acres of waters of the state. A total of 14.73 acres of direct permanent impacts to jurisdictional waters would occur as a result of the Southern Alignment Alternative. Direct temporary impacts within the Southern Alignment Alternative footprint would occur to 0.82 acre of waters of the U.S. and state and 3.34 acres of potential waters of the state. A total of 4.16 acres of direct temporary impacts to jurisdictional waters would occur as a result of the Southern Alignment Alternative. The Southern Alignment Alternative would have approximately 121.58 acres of permanent impacts to the PAMA, 70.07 acres of temporary impacts, and approximately 260.0 acres of indirect impacts.

The Southern Alignment Alternative would construct two bridges across the San Luis Rey River, resulting in constriction of the riparian area and an increase in shading, and a larger area of indirect effects, resulting from the new alignment area. Such impacts could potentially alter temperature and flow, causing future decreases in aquatic habitat functions, plant growth, and invertebrate abundance in shaded areas.

No Build Alternative

The No Build Alternative would not have permanent impacts to wetlands or other jurisdictional waters. Its impacts to wetlands and other jurisdictional waters of the U.S. and state would continue to be indirect and temporary over time, as a result of routine road maintenance and upkeep.

LEDPA Identification

Guidelines under section 404 of the Clean Water Act specify that a permit can be issued for a discharge of dredged or fill material to waters of the United States (U.S.) only if the discharge is determined to be the least environmentally damaging practicable alternative (LEDPA) [40 CFR §230.10 (a)]. When a proposed project requires an individual permit for filling waters of the U.S., an analysis of alternatives must be carried out. For this analysis, the LEDPA generally is the practicable alternative that either avoids waters of the U.S. or impacts the smallest area of waters.

For non-water dependent projects (essentially all surface transportation projects) that require filling of wetlands or other special aquatic sites, which are areas possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. It may be presumed that there are upland alternatives available and that these upland sites are less environmentally damaging. In particular, the “no-build” alternative, and projects that avoid or minimize fill must be carefully analyzed. An alternative with fewer impacts to aquatic resources than the preferred alternative may be eliminated by demonstrating that it has other overriding severe environmental impacts. No discharge of dredged or fill material shall be permitted if it: a) causes or contributes to violations of any applicable State water quality standard; b) jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended (ESA), or results in the likelihood of the destruction or adverse modification of a habitat which is determined to be a critical habitat

under the ESA; c) violates any requirement imposed to protect any marine sanctuary. Because a section 404 permit can only be issued for the LEDPA, section 404 compliance usually requires a more detailed and specific analysis of the aquatic impacts of each alternative. The evaluation of alternatives must consider a reasonable range of options that could fulfill the project purpose and need. Reasonable alternatives are those that "are practical or feasible from the technical and economic standpoint and use common sense, rather than simply desirable from the standpoint of the applicant."

The 404 MOU integration process comprises three checkpoints, which punctuate ongoing coordination efforts. These checkpoints are: (a) Purpose and Need; (b) Identification of the Range of Alternatives, the range of alternatives checkpoint also includes consideration of the criteria used to select and analyze the range of alternatives to be studied in the draft EIS; and (c) Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) Determination and Conceptual Mitigation Plan.

The following waters and wetlands permits would be required to implement the proposed action:

- Section 7 Consultation for Threatened and Endangered Species with USFWS
- Section 404 Permit for dredged and fill waters of the United States from USACE
- Section 1602 Streambed Alteration Agreement with CDFG

In May 2008, Caltrans began coordination with the resource agencies, including USACE, USFWS, NOAA Fisheries, and USEPA, along with CDFG and RWQCB, to implement the NEPA/Section 404 MOU Integration Process for the SR-76 from South Mission Road to I-15 Highway Improvement Project. NEPA/404 meetings began May 22, 2008, and continue into 2011(see Chapter 5, Comments and Coordination). The proposed project's Purpose and Need, Selection Criteria, and Range of Alternatives were developed and refined in these meetings between 2008 and 2010 with the objective of minimizing impacts to biological resources.

In letters to USFWS, USACE, NMFS, and EPA dated February 28, 2011, Caltrans asked for concurrence on the selection of the Existing Alignment Alternative as the preliminary Preferred Alternative and LEDPA. All four of the agencies concurred with Caltrans' selection: USFWS in a letter dated March 22, 2011; EPA in a letter dated March 25, 2011; NMFS in a letter dated March 29, 2011; and USACE in a letter dated April 18, 2011. A Biological Opinion from USFWS was received September 22, 2011. Applications for a Section 404 Permit and a Section 1602 Streambed Alteration Agreement have been submitted and are being reviewed by the agencies as of October 2011.

Since the aquatic resource avoidance alternatives are not practicable, and because each of the SR-76 South Mission Road to I-15 alignment alternatives would result in some aquatic resource loss, the practicable alternative with the least damage to aquatic resources must be selected unless it has other substantial adverse environmental consequences. The Existing Alignment Alternative (Preferred) would impact 4.61 acres of waters of the U.S., including 4.47 acres of special aquatic sites; the Southern Alignment Alternative would impact 0.20 acre of waters of the U.S., all of which are special aquatic sites. Although it would have greater impacts on both waters of the U.S. and special aquatic sites, the Existing Alignment Alternative would have fewer substantial adverse consequences and could have a beneficial effect on remaining wetlands of the San Luis Rey River.

Although biological impacts of both build alternatives could be mitigated, the Southern Alignment Alternative would have a number of impacts in other areas of consideration that would remain substantial after mitigation, whereas the Existing Alternative Alignment would not. The areas of unmitigated substantial adverse impacts of the Southern Alignment Alternative identified in the EIR/EIS are land use, growth, community character and cohesion, relocations, and visual quality/aesthetics. In addition, the Southern Alignment Alternative would have greater impacts on the functions and values of a diverse and sensitive ecosystem. All of these impacts are related to the construction of a new highway in an undeveloped area and are more fully discussed below.

Land Use. The Existing Alignment Alternative would have no substantial land use impacts. The Southern Alignment Alternative would result in one full property acquisition and multiple partial property acquisitions, would displace part of the Vessels Stallion Farm, and would convert agricultural and undeveloped land to roadway uses. Conversion of these land uses within a largely undeveloped area would represent a substantial change to the existing land use pattern. The Southern Alignment Alternative would not be consistent with the current or proposed County General Plan Circulation Element, which shows no major roadway south of the river in this location. Mitigation for land use impacts would be infeasible and remain substantial.

Growth. The Existing Alignment Alternative would be consistent with planned local and regional growth patterns reflected in the current and proposed County General Plan and in SANDAG transportation plans for the region. The Southern Alignment Alternative could increase development pressure in the area of the proposed alignment by introducing a new roadway and providing ready access into an undeveloped rural area. Such pressure would increase the likelihood that land designated for preservation in the Draft NCMSCP could be developed. Mitigation for growth-related impacts would be infeasible and impacts would be substantial.

Community Character and Cohesion. The Existing Alignment Alternative would follow the route of an existing state highway between rural development and the San Luis Rey River corridor. The Southern Alignment Alternative would displace the Vessels Stallion Farm, a business that is representative of the rural character of the community. Impacts to community character would be substantial. No major road now exists in the project area south of the river, and a major road would be incongruous with the mostly open space and sparse development in that area. No mitigation is feasible for the impacts associated with introducing a new transportation corridor into a largely undeveloped area. The character of the area would be permanently changed. Impacts to community character would be severe under the Southern Alignment Alternative and could not be mitigated.

Relocations. The Existing Alignment Alternative would not require the relocation of any homes or businesses. The Southern Alignment Alternative would result in the potential displacement of the Vessels Stallion Farm with its estimated 30 to 50 employees. Relocation would negatively affect the Vessels Stallion Farm business, which is dependent on close proximity to the horse racing circuits using the Del Mar Race Track in San Diego County and the Los Alamitos Race Track in Orange County. Because the Vessels Stallion Farm is located on agricultural land in cultivation, all facilities associated with the Vessels Stallion Farm would have to be relocated, reconstructed, or recultivated on one similarly large continuous property zoned for agricultural uses. Adequate relocation resources may not exist for a site equivalent to the one now occupied by Vessels Stallion Farm. Therefore, relocation impacts associated with the Southern Alignment Alternative would remain unmitigable.

Visual/Aesthetic. The Existing Alignment Alternative would require some landform modification, vegetation removal, and increased area devoted to roadway improvements, resulting in moderately high- to high-level visual impacts occurring in an area where a less obtrusive highway already exists. The Southern Alignment Alternative would noticeably compromise the character and scale of the area by introducing a new transportation corridor, coupled with new bridges, guardrails, drainage structures, and other associated construction components, into a largely undeveloped area. These impacts, combined with extensive landform modification and vegetation removal, would result in substantially reduced visual quality and character. Mitigation measures could reduce impacts, but visual impacts associated with the Southern Alignment Alternative would be substantial after mitigation.

Biological Resources. Neither build alternative would have biological resource impacts that could not be mitigated. However, the Southern Alignment Alternative would have impacts on ecosystem integrity and species diversity that would be more severe than the Existing Alignment Alternative. The San Luis Rey River with its associated riparian habitat has been identified as an important regional wildlife movement corridor, providing connectivity to conservation lands in Riverside County to the north and coastal areas to the west, including on Marine Corps Base Camp Pendleton. The area in the project vicinity south of the San Luis Rey River is much more open and less developed than the area north of the river, and existing SR-76 is already a barrier to wildlife movement north of the river. Studies have shown that wildlife crossing to the river valley from the north is characterized by smaller species, with large mammals such as deer and mountain lions more likely south of the river.

Either build alignment could be constructed with engineered wildlife crossings and directional fencing to facilitate safe wildlife crossing of the roadway. Regardless of such measures, however, the Southern Alignment Alternative would construct a substantial barrier between the river and the open areas to the south where there currently is no barrier. The Existing Alignment Alternative would have greater direct impacts on waters of the U.S. and special aquatic resources. But to the extent that more diverse species and connected habitats within an ecosystem interact for mutual benefit, the Existing Alignment Alternative could have a more beneficial effect on the functions and values of remaining wetlands and riparian habitats in the river valley, including waters of the U.S. and special aquatic resources, compared to the Southern Alignment Alternative.

3.21.4 Avoidance, Minimization, and/or Mitigation Measures

General Avoidance and Minimization Measures

The proposed project alignment alternatives were designed to avoid and minimize impacts to wetlands and jurisdictional waters wherever possible. Design iterations developed during the planning stages of the proposed project resulted in shifts to further reduce impacts to sensitive wetlands and waters. With the exception of the Live Oak Creek bridge, the Existing Alignment Alternative (Preferred Alternative) minimizes fragmentation impacts by avoiding additional bridge crossings. The Southern Alignment Alternative minimizes impacts by avoiding wetlands with the exception of the bridge crossings. Floodplain and riparian habitat impacts are minimized, in addition to avoiding established mitigation sites. The majority of avoidance and minimization measures for vegetation have been addressed in Section 3.20.3.

Additional measures to further avoid and reduce impacts to these sensitive resources would be incorporated into project implementation via responsible preconstruction planning and construction activities. Such measures would include, but not be limited to, preconstruction

meetings, contractor awareness programs, temporary fencing and signage of all sensitive resource areas immediately adjacent to the proposed project footprint, the presence of biological monitors during construction activities adjacent to wetlands, and the implementation and strict adherence to standard BMPs.

Mitigation for Jurisdictional Waters and Wetlands

Unavoidable impacts to USACE and CDFG wetlands require compensatory mitigation. Temporary impacts to USACE and CDFG jurisdiction would be compensated at a 1:1 ratio with on-site restoration of the same habitat type that was temporarily disturbed. Indirect impacts would be compensated at a 1:1 ratio with off-site restoration of the same habitat that was indirectly disturbed. Permanent impacts to USACE and CDFG jurisdictional wetlands would be mitigated at off-site mitigation sites through a combination of creation, restoration, and enhancement. The proposed mitigation sites, the Tabata and Vessels properties (and the Groves property for uplands), were previously described in Section 3.20.3 (Figure 3.20-5).

Caltrans is not a signatory to local NCCPs. The project falls within the boundaries of the Draft NCMSCP and the San Diego MHCP. Impacts to sensitive habitat types could be mitigated through a combination of habitat creation, restoration or revegetation, or acquisition of in-kind habitat from an approved mitigation land bank. For the portion of the project that is coincident with the MHCP, CDFG and USACE would likely require the mitigation ratios listed in the MHCP Subarea Plan to compensate for impacts to habitats they regulate. Tables 3.21-3 and 3.21-4 identify the mitigation ratios proposed for this project. All mitigation ratios would need to be negotiated with the resource agencies; however, for the purposes of this analysis, previously approved mitigation ratios have been used.

Table 3.21-3. Existing Alignment Alternative (Preferred Alternative) Mitigation Proposal for Permanent Impacts to Riparian and Wetland Vegetation

Habitat Type	Permanent Impacts	Mitigation Ratios and Acres for Permanent Impacts
Riparian and Wetland		
Disturbed Wetland (Arundo Scrub)	0.63	1:1 = 0.63 restoration
Coastal and Valley Freshwater Marsh	0.06	3:1 = 0.18 creation
Elderberry Scrub	0.0	0
Mulefat Scrub	5.36	3:1 = 16.08 5.36 creation; 10.72 restoration
Southern Cottonwood-Willow Riparian Forest	22.58	3:1 = 67.8 22.6 creation; 45.2 restoration
Southern Willow Scrub	3.99	3:1 = 11.97 3.99 creation; 7.98 restoration
Tamarisk Scrub	0.0	0
Open Water (San Luis Rey River)	0.01	3:1 = 0.03 0.01 creation; 0.02 restoration
Riparian and Wetlands Total [b]	***32.65***	***96.69 = 32.14 creation; 64.55 restoration***

Tabata available acres = 7.3 creation, 15.4 restoration; Vessels acres = 87.7 acres available for riparian creation, 22.9 acres available for riparian restoration.

[a] Portions of a riparian vegetation community may or may not be considered jurisdictional, as vegetation only composes one parameter for evaluating potential jurisdictional waters. For these reasons, acreages for wetland vegetation communities presented within jurisdictional waters may not coincide with the BSA-wide acreage totals for riparian and wetland vegetation communities (i.e., southern willow scrub was observed outside the floodplain of the San Luis Rey River). The larger acreage would be mitigated.

Temporary and Indirect Impacts are mitigated at a 1:1 ratio.

[b] All acreages are rounded to the nearest hundredth after summing.

Table 3.21-4. Southern Alignment Alternative – Mitigation Proposal for Permanent Impacts to Riparian and Wetland Vegetation

Habitat Type	Permanent Impacts	Mitigation Ratios and Acres for Permanent Impacts
Riparian and Wetland		
Disturbed Wetland (Arundo Scrub)	0.10	1:1 = 0.10 restoration
Coastal and Valley Freshwater Marsh	0.0	0
Elderberry Scrub	0.0	0
Mulefat Scrub	2.29	3:1 = 6.87 2.29 creation; 4.58 restoration
Southern Cottonwood-Willow Riparian Forest	8.58	3:1 = 25.74 8.58 creation; 17.16 restoration
Southern Willow Scrub	0.73	3:1 = 2.19 0.73 creation; 1.46 restoration
Tamarisk Scrub	0.0	0
Open Water (San Luis Rey River)	3.67	3:1 = 11.01 3.67 creation; 7.34 restoration
Riparian and Wetlands Total [b]	***15.37***	***45.91 = 15.27 creation; 30.64 restoration***

Tabata available acres = 7.3 creation, 15.4 restoration; Vessels acres = 87.7 acres available for riparian creation, 22.9 acres available for riparian restoration.

[a] Portions of a riparian vegetation community may or may not be considered jurisdictional, as vegetation only composes one parameter for evaluating potential jurisdictional waters. For these reasons, acreages for wetland vegetation communities presented within jurisdictional waters may not coincide with the BSA-wide acreage totals for riparian and wetland vegetation communities (i.e., southern willow scrub was observed outside the floodplain of the San Luis Rey River). The larger acreage would be mitigated.

[b] All acreages are rounded to the nearest hundredth after summing.

Temporary impacts to emergent wetlands (coastal and valley freshwater marsh) would be compensated at a minimum 1:1 mitigation ratio by on-site restoration; permanent impacts to vegetated wetlands should be compensated at a 3:1 mitigation ratio with no net loss.

The 162-acre Vessels Mitigation Site has approximately 87.7 acres available for riparian creation and 22.9 acres available for riparian restoration and enhancement. The fill obtained from removing existing material at the site to create riparian habitat would be used on the SR-76 South Mission to I-15 Highway Project. The Vessels grading plan proposes to remove existing soil from within the San Luis Rey 100-year floodplain. This site was addressed in Section 3.20.3.

Wetlands Only Practicable Finding

The Wetlands Avoidance Alternatives were studied with the objective of avoiding all impacts to jurisdictional waters, including wetlands. Both of these alternatives would have had substantial impacts to the social and natural environments that would be avoided by the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. Both would have had considerable engineering and construction challenges, and would have added substantially to the cost of construction. While both these alternatives would have avoided the San Luis Rey River wetlands, both would have impacted wetlands associated with other drainages (including Live Oak Creek north of the river) that flow generally north/south and are tributaries of the San Luis Rey River, so that complete avoidance of impacts to wetlands was not possible. Once it was recognized that pursuing a Wetlands Avoidance Alternative was not a viable option, efforts were focused on minimizing the wetland impacts of the two viable design alternatives.

The Wetlands Avoidance Alternative for an alignment north of the San Luis Rey River would have required an alignment farther north than the current SR-76 roadway from South Mission Road to Star Track Way, passing through more rugged terrain in two segments to avoid wetlands in the San Luis Rey River corridor. The northern Wetlands Avoidance Alternative would have required relocations of local road intersections and possible realignment of local road segments. The current SR-76 roadway would have been retained and relinquished to San Diego County as a frontage road and for local access. Additional wetland encroachment would be required if the relinquished roadway needed improvement to meet current San Diego County standards.

Because of the terrain, either massive cut and fill slopes or tunneling would have been required through two areas to maintain an acceptable vertical profile and a four-lane cross section. Either option would have resulted in a large footprint of topographic disturbance, requiring property acquisitions and relocation of residents. In addition, new access to numerous properties near the route would have been required. These disturbances would have contributed to impacts on the social environment, visual impacts of the roadway from grading in a rural setting, impacts on community cohesion and character north of the river, impacts to known cultural resources, and considerable impacts to upland habitats.

The Wetlands Avoidance Alternative for an alignment south of San Luis Rey River was also studied. Such an alignment would have required three bridges across the San Luis Rey River. Two bridges would be in approximately the same locations as those for the Southern Alignment Alternative, but would have to be longer so that abutments or supporting columns were not sited in the wetlands. The western (downstream) bridge would have to be extended approximately 3,200 feet and the eastern (upstream) bridge would have to be extended approximately 500 feet.

A third, separate bridge would need to be constructed adjacent to the western bridge to connect the existing SR-76 to the new SR-76 alignment, since the new alignment would be higher than the existing roadway. All three bridges would require methods of design and construction that would avoid placing any elements of the bridges or the falsework used to construct them in the wetlands. Both the northern Wetlands Avoidance Alternative and the southern Wetlands Avoidance Alternative would require relocating the intersection with South Mission Road. That intersection was designed as part of the SR-76 Melrose Drive to South Mission Road project and is currently under construction.

The proposed project would have a variety of water quality considerations. With the inclusion of BMPs, the project would not substantially affect the water quality in the area either on a short-term or a long-term basis.

Alternatives previously discussed in Chapter 2, the Existing Alignment with 70 mph design speed (Alternative 1 in Table 2.2) and the Existing Alignment with 55 mph design speed (Alternative 2 in Table 2.2) follow the existing SR-76 alignment to the maximum extent possible and had similar project features. The main difference in the alternatives was in the selection of design speed, which then led to differences in the design criteria for the proposed project features. The design speed range for a conventional highway in flat terrain is 55–70 mph, as shown in the 6th Edition of the Highway Design Manual (HDM), Table 101.2. Existing Alignment No. 1, had a design speed of 70 mph, and Existing Alignment No. 2 had a design speed of 55 mph. The Southern Alignment (Alternative 4) had a design speed of 70 mph, and this proposed alignment diverges south from the current SR-76 alignment toward the hills along the southern edge of the San Luis Rey River valley.

At the start of the PA/ED phase, the PDT focused on how each of these three viable alternatives balanced the needs of the roadway design and the need to minimize environmental and community impacts. Using the appropriate design and environmental guidance, such as the HDM and Environmental Handbook, Existing Alignments No. 1 and No. 2 were then merged into a single feasible northerly roadway alternative with a design speed of 65 mph, which is within the range of design speed values shown in HDM Table 101.2; this alternative retained the Existing Alignment name. The design speed for the Southern Alignment was also modified to a 65 mph design speed

In addition to existing deficiencies related to roadway capacity, there are nonstandard roadway features. The geometric standards, from which the existing two-lane rural highway was initially designed, are no longer functional for the traffic volumes currently using the facility. SR-76, from South Mission Road to I-15, currently has narrow shoulders and varying lane widths. The superelevation, which is the inclination of the bed of a banked road, on existing horizontal curves does not meet current Caltrans standards, and the lengths of tangents separating curves also do not meet current standards for superelevation runoff distances. SR-76 also has many uncontrolled access points, including private driveways, and many of these access points are on horizontal curves or have nonstandard right-turn deceleration/acceleration lanes.

In accordance with the Caltrans HDM, the basic lane width for new construction shall be 12 feet and the minimum allowable continuous usable paved shoulder width is 8 feet. Shoulder widths of 10 feet are proposed to provide additional width for roadway maintenance. By implementing current roadway design standards and by improving access to SR-76, the proposed project would improve the existing roadway, improve motorist and worker safety, enhance mobility, and relieve congestion.

Between 2006 and 2010, the Existing Alignment Alternative (Preferred Alternative) was subject to multiple design iterations in a continuing effort to improve its design performance and minimize its impacts to the environment, including waters and wetlands. The design iterations were given alphanumeric labels, with the baseline alignment designated Iteration-1 and the current design designated Iteration-14.

Iteration-1 was a 70-mph design-speed highway intended to modify the existing nonstandard curve radii and superelevation transitions and to meet current Caltrans design standards. The design speed required a shoulder-to-shoulder width of 128 feet and curve radii of 2,100 feet with longer tangents. A lower design speed would allow less width, tighter curve radii, and less right-of-way acquisition, eliminating one relocation, lowering impacts to community character and cohesion, and decreasing direct impacts to sensitive biological resources such as wetlands and sensitive habitat.

Iterations-2 through Iteration-14 took the baseline established with Iteration-1 through a design process with input from the PDT, which included an environmental component. As studies were completed and sensitive areas were established, the design was refined to avoid or minimize impacts to ESAs. At times, it became necessary to increase impacts to one resource to avoid impacts to another. Therefore, impacts to waters and wetlands changed throughout the project development process.

Iteration-2 reduced the design speed to 55 mph, allowing 1,000-foot radius curves and creating more frequent curvature in the alignment. Impacts to sensitive environmental habitat, including wetlands, were reduced, but there were engineering concerns. Because larger superelevation rates were needed for the smaller radii, there was concern over intersections where vehicles

would have to turn into a curve banked in the opposite direction. In addition, the smaller curves introduced a greater number of reversing curves, making driving less comfortable.

Iteration-3 realigned the road to improve superelevation rates, and a reduced width median lowered impacts on the community and biological resources. However, more accurate mapping identified an archaeological site near Gird Road that was impacted by the alignment.

Iteration-4 was designed for more avoidance of ESAs. Median width and, consequently, roadway width were reduced, but the narrower medians required larger curve radii.

Iteration-5 further reduced median width to the minimum standard width, but the narrower medians required larger curve radii, incurring environmental impacts in some areas and shifting the alignment closer to the San Luis Rey River. Environmental impacts were not reduced for the majority of the alignment.

Iteration-6 used a 30-foot-wide median in some locations, allowing tighter curve radii to fit the alignment better to the terrain. Access to SR-76 was reduced by combining Star Track Way and Sage Road traffic into one intersection at Star Track Way, allowing use of the existing SR-76 between Star Track Way and Sage Road as a future frontage road. Areas of larger tangents accommodated a 22-foot-wide median for reduced impacts.

Iteration-7 was an attempt to remove the curvature on the eastern portion of the alignment west of Old Highway 395 near Star Track Way and Sage Road to create a shorter roadway and reduce earthwork, but this induced excessive right-of-way acquisition because of a long tangent with no curves.

Iteration-8 shifted 2,000 feet of the alignment between Gird Road and Star Track Way to reduce or eliminate large cut slopes that required excessive right-of-way takes and wetland impacts.

Iteration-9 adjusted the location of the tie-in to improved SR-76 and combined access for Gird Road and Flowerwood Lane.

Iteration-10 through Iteration-14 made adjustments in engineering parameters that did not change impacts to wetlands.

In sum, the Wetlands Avoidance Alternatives would have increased the project footprint, increased project impacts, substantially impacted the community and social environment, extended the design and construction schedule, and added an estimated $150 to $360 million to the project cost. For these reasons, the Wetlands Avoidance Alternatives were not pursued further and, with the concurrence of the resource agencies, were withdrawn from consideration.

Based on the above consideration, it is determined that there is no practicable alternative to the proposed construction in wetlands, and that the proposed project included all practicable measures to minimize harm to wetlands that may result from such use.

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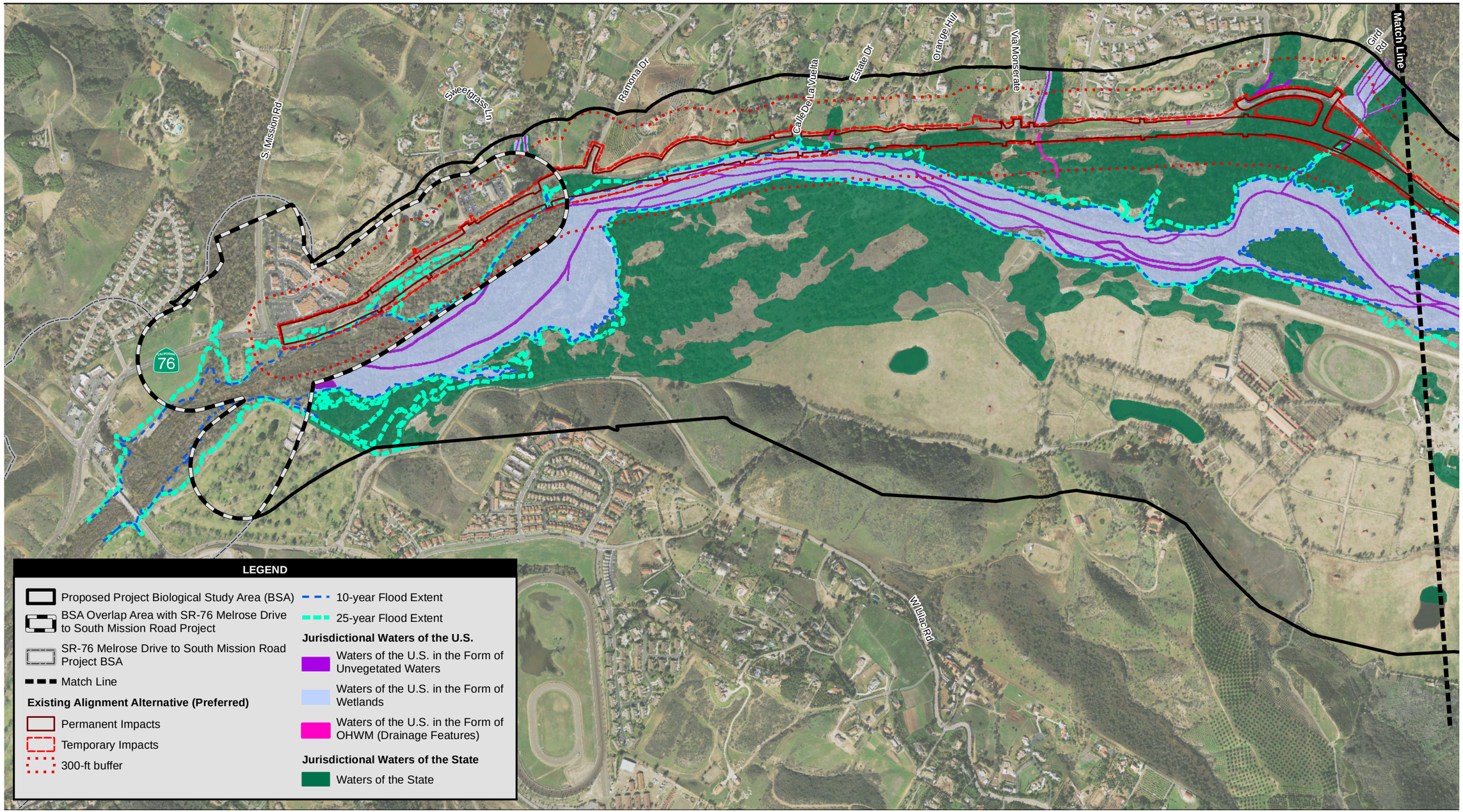


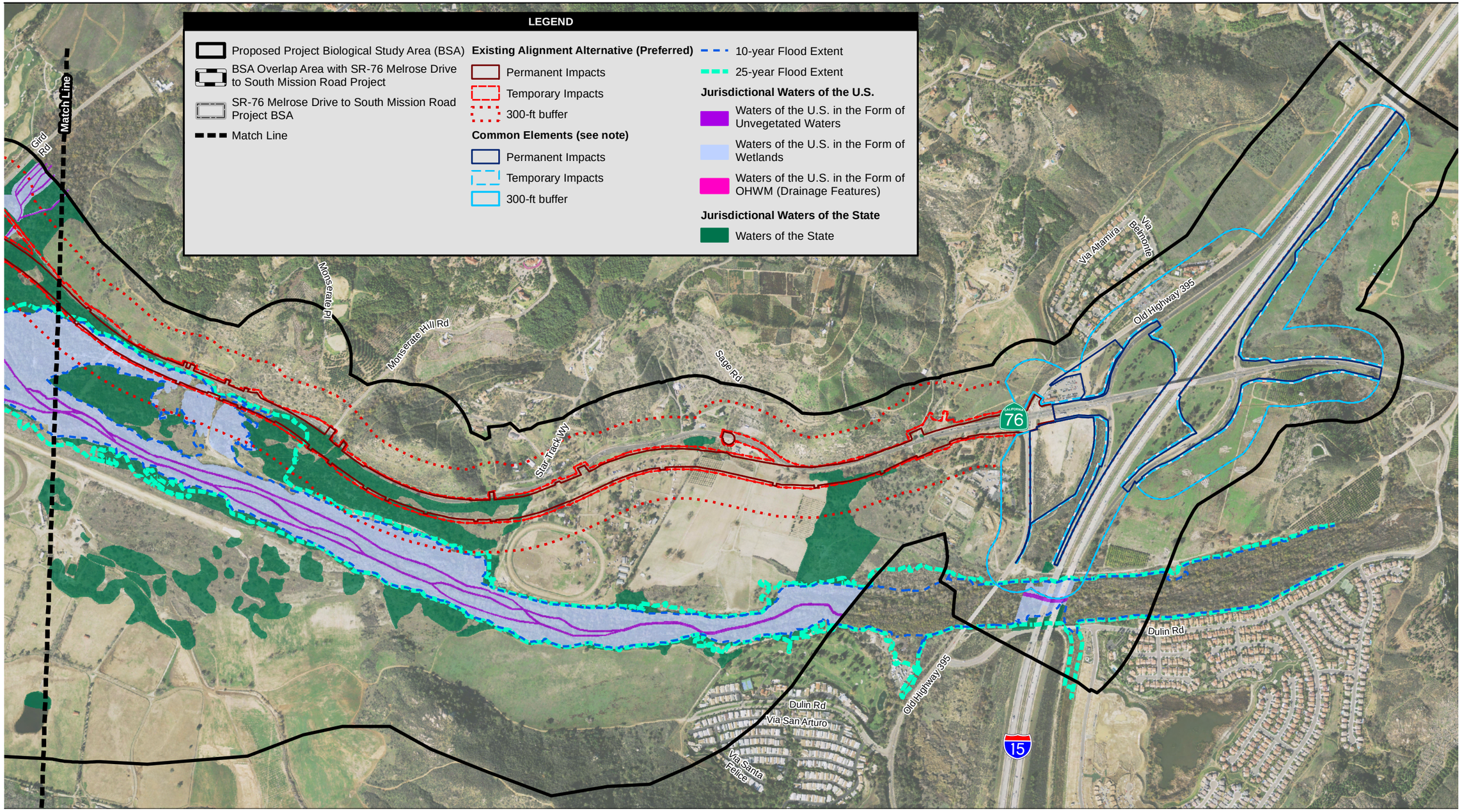
Source: DigitalGlobe 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.21-1a
Jurisdictional Waters - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_21_1a_ juris_waters_Existing_WEST.mxd, 10/9/2011, augellop



Source: DigitalGlobe 2008; Dokken Engineering 2010

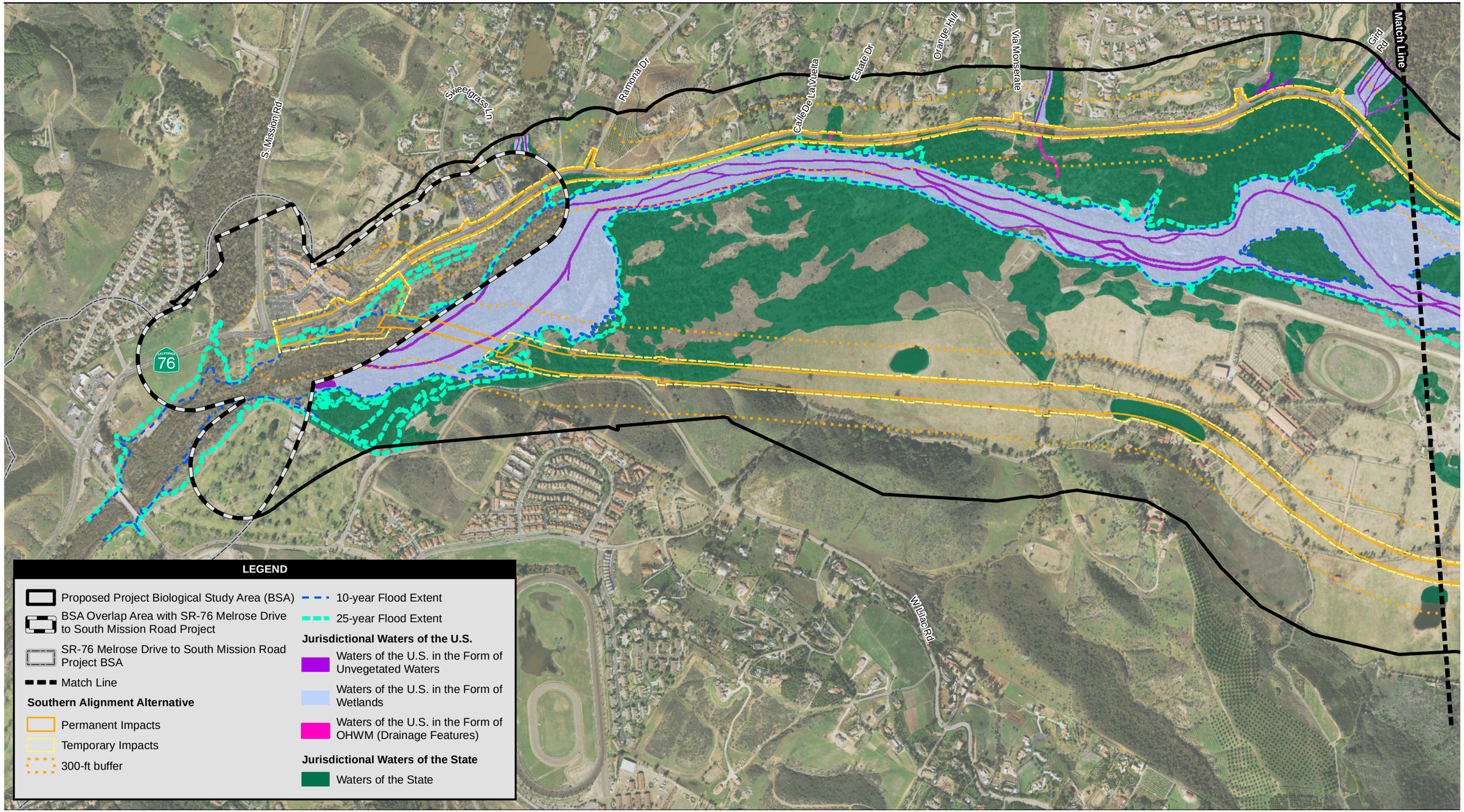
1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.21-1b
Jurisdictional Waters - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_21_1b_ juris_waters_Existing_EAST.mxd, 10/6/2011, augellop



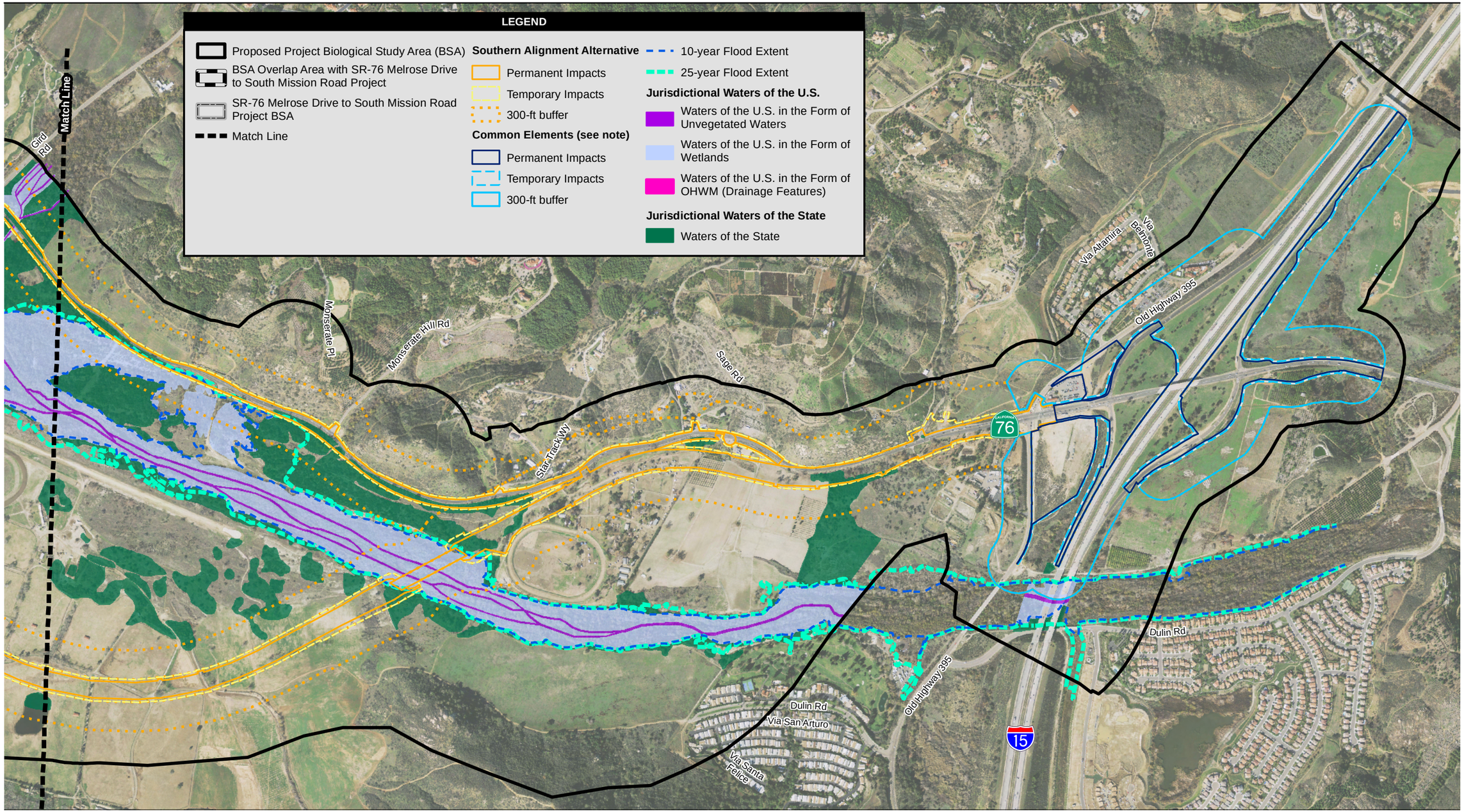
Source: DigitalGlobe 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.21-2a
Jurisdictional Waters - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_21_2a_juris_waters_Southern_WEST.mxd, 10/9/2011, augellop



Source: DigitalGlobe 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.21-2b
Jurisdictional Waters - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_21_2b_ juris_waters_Southern_EAST.mxd, 10/11/2011, augellop

3.22 PLANT SPECIES

3.22.1 Regulatory Setting

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; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). See Section 3.24, Threatened and Endangered Species, for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for the FESA can be found at United USC Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for the 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 California Fish and Game Code, Section 1900–1913, and CEQA, PRC Sections 21000–21177.

3.22.2 Affected Environment

Sixty-six special-status plant species are known to occur or have potential to occur within the BSA based on information obtained from the Jepson Online Interchange database, the California Natural Diversity Database, and conducted surveys. A full list of these 66 special-status species is provided in the NES for the proposed project (August 2010). Of the special-status plant species with potential to occur, only three species, San Diego ambrosia (*Ambrosia pumila*), Palmer’s sagewort (*Artemisia palmeri*), and Engelmann oak (*Quercus engelmannii*), were detected within the BSA during rare plant surveys. San Diego ambrosia is federally listed as endangered and is discussed further in Section 3.24, Threatened and Endangered Species. Among the special-status plant species that have not been documented as occurring within the BSA but are considered to have potential to occur, two were determined to have high potential for occurrence in the BSA: chaparral sand verbena (*Abronia villosa* var. *aurita*) and Lewis’ evening primrose (*Camissonia lewisii*). Species accounts for the special-status species known to occur or with high potential to occur within the BSA (other than those discussed in Section 3.24) are provided below.

The locations of special-status plant species are displayed in Figures 3.22-1 and 3.22-2 as polygons. Polygons represent the area of the populations. Counts for San Diego ambrosia polygons were quite variable across survey years and across different polygons, ranging from low (100s) to very high (100,000s). Palmer’s sagewort and Engelmann oak polygons each represent less than 10 individuals.

Palmer’s Sagewort (*Artemisia palmeri*)

Palmer’s sagewort is designated as limited in distribution and fairly endangered in California. Palmer’s sagewort typically occurs in chaparral, coastal scrub, riparian scrub, riparian woodland, and riparian forest below 3,000 feet in elevation. During the 2007 plant surveys,

Palmer's sagewort was encountered in a single patch of less than 10 individuals within the BSA, south of the existing SR-76 roadway (Figures 3.22-1 and 3.22-2); however, no Palmer's sagewort occurrences overlap with either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative.

Engelmann Oak (*Quercus engelmannii*)

Engelmann oak is designated as limited in distribution and fairly endangered in California. Engelmann oak typically occurs in chaparral, cismontane woodland, oak woodland, riparian woodland, and valley and foothill grassland below 4,300 feet in elevation. During the 2007 surveys, Engelmann oak was encountered as a single stand (less than 10 individuals) located along the southern margin of the BSA (Figures 3.22-1 and 3.22-2). The Engelmann oak stand occurs within the 300-foot buffer of the Southern Alignment Alternative but does not overlap with the Existing Alignment Alternative (Preferred Alternative) footprint or buffer.

Chaparral Sand Verbena (*Abronia villosa* var. *aurita*)

Chaparral sand verbena has a wide distribution but is threatened by nonnative species, roadside maintenance, development, and alterations in fire frequency. Chaparral sand verbena typically occurs in chaparral, coastal scrub, and desert dunes. Chaparral sand verbena was not detected during 2006 or 2007 focused surveys; however, suitable habitat is present within the BSA and it is known from nearby portions of the San Luis Rey River. Therefore, this species has a high potential to occur within the BSA.

Lewis' Evening-Primrose (*Camissonia lewisii*)

Lewis' evening primrose typically occurs in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland in sandy or clay soils. Lewis' evening-primrose was not detected during 2006 or 2007 focused surveys; however, suitable habitat is present within the BSA and it is known from nearby portions of the San Luis Rey River. Therefore, this species has a high potential to occur within the BSA.

3.22.3 Environmental Consequences

Existing Alignment Alternative (Preferred Alternative)

Special-status plant species were not detected within the footprint or 300-foot buffer of the Existing Alignment Alternative (Preferred Alternative), and impacts to special-status plants are not anticipated. There is a possibility that the Existing Alignment Alternative (Preferred Alternative) could potentially impact undetected special-status plant occurrences within the alignment footprint or buffer area. However, the potential impacts to special-status species (if any) would not be expected to substantially reduce the number or restrict the range of these species to levels affecting their population stability in the region.

Southern Alignment Alternative

Special-status plants were not detected within the footprint of the Southern Alignment Alternative, and direct impacts to special-status plants are not anticipated. Approximately 0.10 acre of occupied Engelmann oak habitat (encompassing seven individual trees) occurs within the 300-foot buffer of the Southern Alignment Alternative and may be impacted indirectly by the project. In addition, as with the Existing Alignment Alternative (Preferred Alternative), there is a

possibility that the Southern Alignment Alternative could potentially impact undetected special-status plant occurrences within the alignment footprint or buffer area. However, the potential impacts to Engelmann oak or other potentially occurring special-status species (if any) would not be expected to substantially reduce the number or restrict the range of these species to a level affecting their population stability in the region.

No Build Alternative

The No Build Alternative would not have temporary, permanent, direct, or indirect impacts to special-status plant species.

3.22.4 Avoidance, Minimization, and/or Mitigation Measures

Measures to avoid and minimize potential impacts to sensitive plant species and their habitats are addressed in Section 3.20.3. A complete list of all avoidance, minimization, and/or mitigation measures that will be implemented for impacts to sensitive plant species and their habitats is included in the USFWS Biological Opinion for this project (Appendix K). Measures proposed in the Biological Opinion (Appendix K) for the SR-76 South Mission to I-15 Highway Improvement Project include, but are not limited to, the following:

- avoid upland, riparian, and wetland vegetation as much as possible;
- designate ESAs for avoidance of impacts to habitat;
- revegetate disturbed habitat;
- restrict areas used for changing oil, refueling, and similar actions;
- locate storage and staging areas as far as possible from sensitive habitat;
- implement Caltrans standard dust control measures; and
- incorporate BMPs to control erosion and sedimentation.

As previously discussed, special-status plant species were not detected within the footprint or 300-foot buffer of the Existing Alignment Alternative (Preferred Alternative), and impacts to special-status plants are not anticipated. However, the Existing Alignment Alternative (Preferred Alternative) could potentially impact undetected special-status plant occurrences within the alignment footprint or buffer area. Therefore, any unavoidable impacts to special-status plant species would require mitigation. Consultation with the resource agencies would determine the type and extent of mitigation measures. Potential indirect impacts to Engelmann oak resulting from the Southern Alignment Alternative would be avoided and minimized by measures addressed for vegetation communities in Section 3.20.3.

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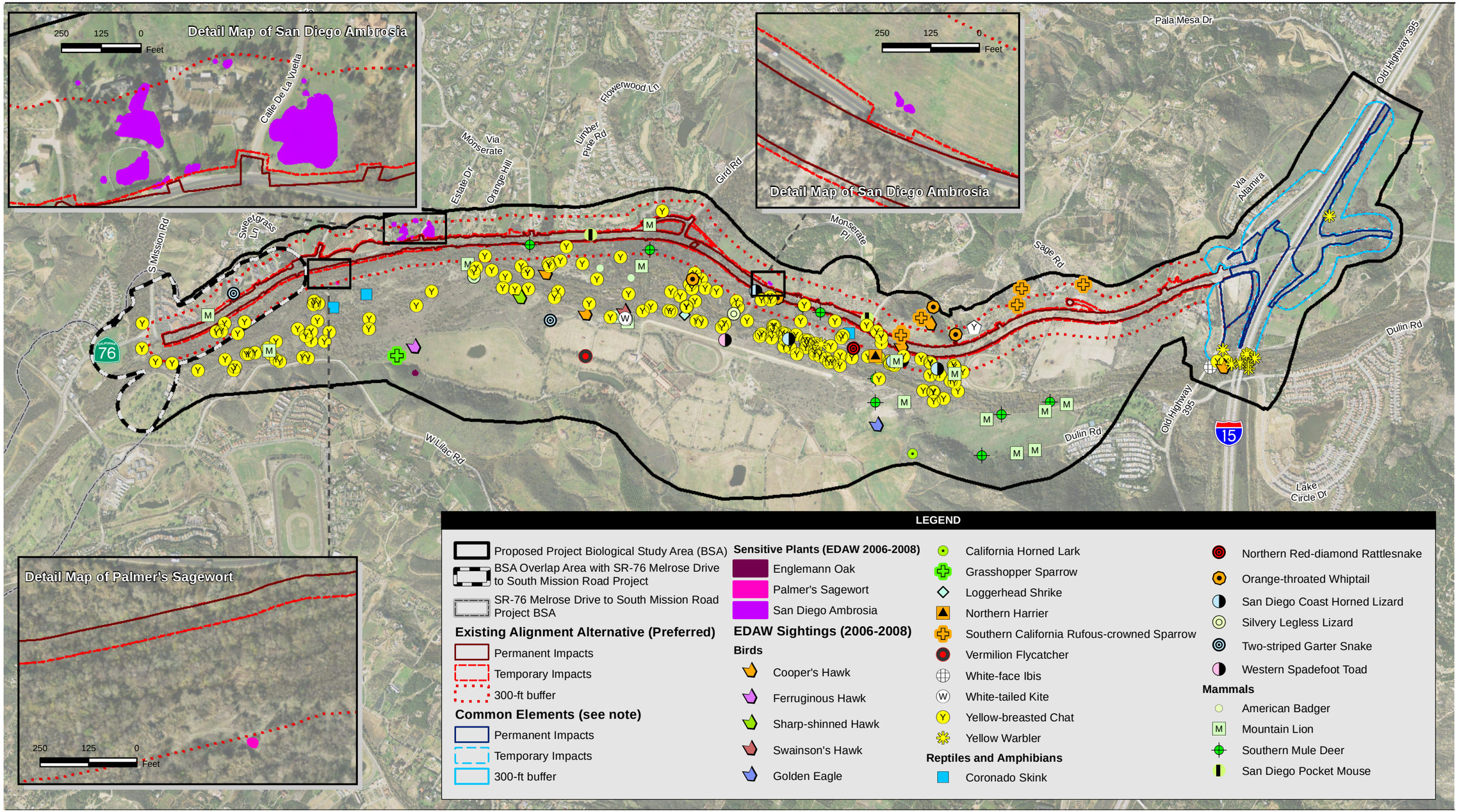


Source: DigitialGlobe 2008; EDAW 2006, 2007; Dokken Engineering 2010

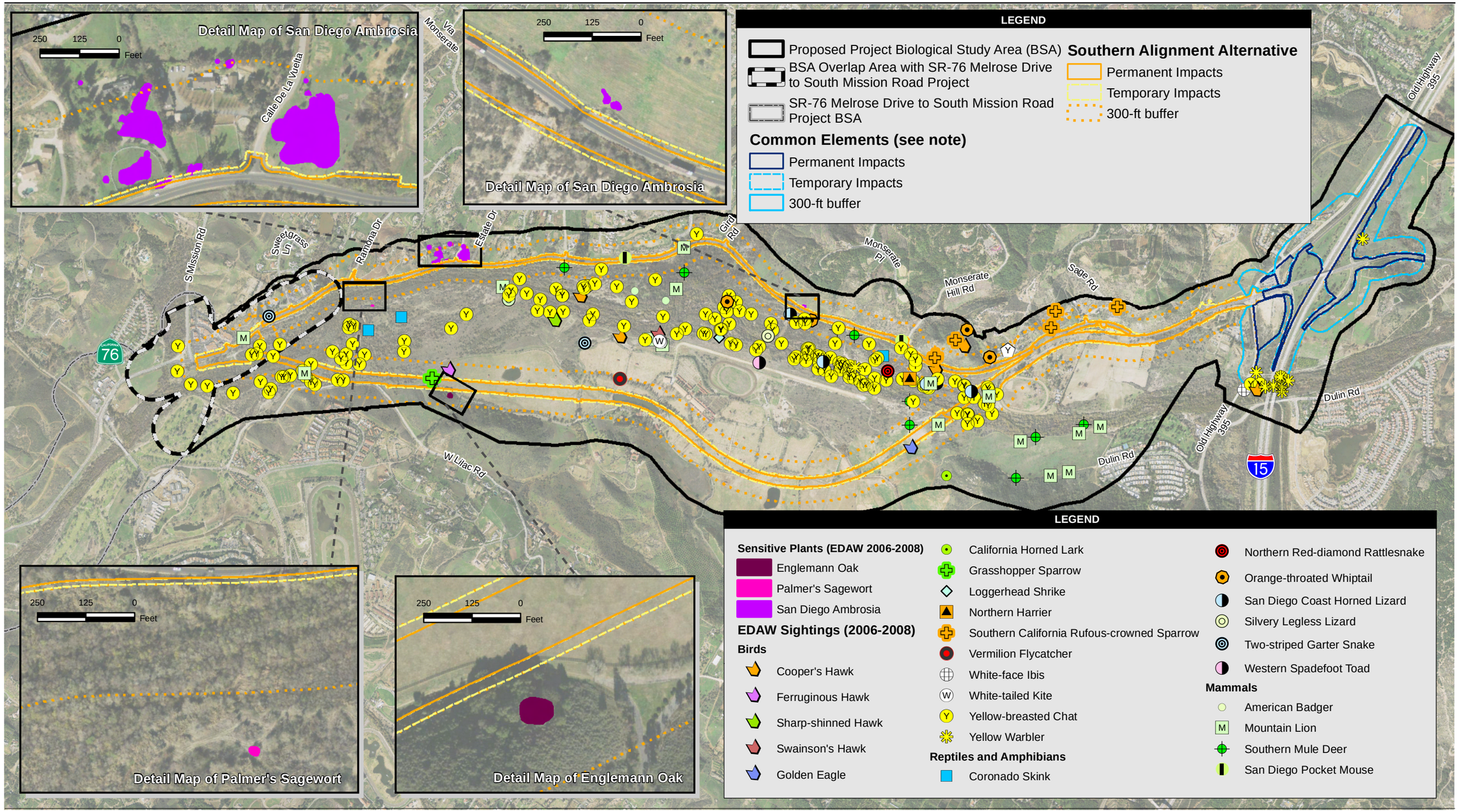
2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.22-1
Sensitive Plants and Other Sensitive Wildlife Species - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_22_1_sensitive_combined_species_Existing.mxd, 10/11/2011, augellop



Source: DigitialGlobe 2008; EDAW 2006, 2007, Dokken Engineering 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.22-2
Sensitive Plants and Other Sensitive Wildlife Species - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_22_2_sensitive_combined_Species_Southern.mxd, 10/11/2011, augellop

3.23 ANIMAL SPECIES

3.23.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the CESA or FESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 3.24, Threatened and Endangered Species. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species. Additionally, a section on fishery resources is included to address FEMA Executive Order 11988 (Floodplain Management). Natural and beneficial floodplain values, while not specifically defined in Executive Order 11988, include resources such as fish.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act (CEQA)
- Sections 1600–1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

3.23.2 Affected Environment

This section is based on the State Route 76 South Mission Road to Interstate 15 Highway Improvement Project NES, the SR-76 South Mission Road to Interstate 15 Highway Improvement Project Wildlife Movement Study, and the SR-76 South Mission Road to Interstate 15 Highway Improvement Project Noise Report for Sensitive Wildlife Receivers. Numerous special-status wildlife species are known to occur or have potential to occur within the BSA based on the surveys conducted and on the U.S. Geological Survey (USGS), USFWS, and SanGIS databases, and the California Natural Diversity Database . A full list of these special-status species is provided in the NES for the proposed project. Of these special-status wildlife species, 30 were detected within the BSA during surveys conducted for the proposed project. Of these species, four are federally listed and are known to breed within the BSA: arroyo toad (*Bufo californicus*), least Bell's vireo (*Vireo belli pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and coastal California gnatcatcher (*Polioptila californica californica*). These species are discussed further in Section 3.24, Threatened and Endangered Species (see Figures 3.24-1a through 3.24-11). Among the special-status wildlife species that were not detected during surveys but are considered to have potential to occur, one, Yuma myotis (*Myotis yumannensis*), is known to occur within the BSA from Draft NCMSCP records, and five were determined to have a high potential for occurrence within the BSA: coast patch-nosed snake (*Salvadora hexalepis virgultea*), prairie falcon (*Falco mexicanus*), least bittern (*Ixobrychus exilis*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and

Stephens' kangaroo rat (*Dipodomys stephensi*). Stephens' kangaroo rat is federally listed as endangered and is discussed further in Section 3.24, Threatened and Endangered Species.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*)

The coast patch-nosed snake is a state species of special concern. The species occurs in California from the northern Carrizo Plains in San Luis Obispo County, south through the coastal zone, south and west of the deserts, and into coastal northern Baja California. The snake inhabits a variety of vegetation communities including coastal sage scrub, chaparral, riparian, grasslands and agricultural fields. Suitable habitat is present within the BSA. The closest known location of this species is on Marine Corps Base Camp Pendleton.

Prairie falcon (*Falco mexicanus*)

The prairie falcon is on the state watch list. Prairie falcons inhabit hills, canyons, and mountains of arid grasslands and shrub-steppes of southwestern Canada, western United States, Baja California, and northern Mexico. The falcon forages in open grasslands, agricultural fields and desert scrub, and prefers ledges on rocky cliffs for nesting. Suitable habitat for this species is present within the BSA.

Least bittern (*Ixobrychus exilis*)

The least bittern is a state species of special concern. It occurs within marshes or large emergent wetlands with cattails and tules in San Diego county. Suitable habitat occurs within the BSA. The closest known location is east of I-15, south of the San Luis Rey River, and northwest of Keys Canyon.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)

San Diego (or coastal) black-tailed jackrabbit is a state species of special concern. It occurs only on the coastal side of the southern California mountains. This subspecies has been recorded from northern Baja California through San Diego, Orange, Los Angeles, and Ventura counties, as well as on Mt. Pinos. The jackrabbit prefers early stages of chaparral, open coastal sage scrub, and grasslands near the edges of brush. Suitable habitat occurs throughout the BSA. The closest known location is approximately 4 miles west of the BSA.

Yuma myotis (*Myotis yumannensis*)

The Yuma myotis is listed as low to medium priority status species by the Western Bat Working Group. The Yuma myotis bat occurs along the western quarter of North America from Canada, south to Mexico, and eastward to Idaho and Texas, including parts of Montana, Utah and Colorado. This bat is common in California and found throughout the state except in the Mojave and Colorado deserts of southeastern California. Habitat for this species consists of open forests and woodlands with water sources. The species is known to occur within the BSA.

Sensitive species that were detected and are likely to breed within the BSA are discussed in further detail below and depicted in Figures 3.22-1 and 3.22-2.

Western Spadefoot Toad (*Spea hammondii*)

The western spadefoot toad is a state species of special concern. The western spadefoot occurs in the central valley of California and west of the coastal ranges from Point Conception to Baja California Norte, Mexico. The species occurs in a wide range of habitats, including lowlands, foothills, grasslands, open chaparral, coastal sage scrub, and pine-oak woodlands. Breeding takes place generally from January through May. Adults emerge from burrows with the onset of early spring rains, after which they congregate during the nights to breed in temporary ponds, vernal pools, and backwaters of slow-flowing creeks. Tadpoles are readily identifiable at later developmental stages. Western spadefoots were detected during surveys for arroyo toad.

Northern Red-diamond Rattlesnake (*Crotalus ruber ruber*)

The northern red-diamond rattlesnake is a state species of special concern. This subspecies is restricted to southern California and Baja California from Morongo Pass to the tip of the Baja Peninsula, with the majority of its California range occurring in San Diego County. It is often found in chaparral, in coastal sage scrub, along creek banks, and in granite rock outcrops or piles of debris. When inactive, the northern red-diamond rattlesnake occurs in rock crevices, animal burrows, brush piles, or similar microhabitats. Northern red-diamond rattlesnakes are crepuscular and most frequently seen in spring. In regions with hot summers, the subspecies may be nocturnal. It is generally active from mid-spring to mid-fall. Prey includes small mammals such as ground squirrels, mice, and rabbits, plus lizards, birds, and other snakes. The northern red-diamond rattlesnake was observed by biologists in coastal sage scrub and riparian/upland-transitional habitat.

Orange-throated Whiptail (*Asidoscelis hyperythra beldingi*)

The orange-throated whiptail is a state species of special concern. In California, this subspecies is found in the southernmost counties on the west side of the Peninsular Ranges between sea level and 3,000 feet. Orange-throated whiptails inhabit washes, streams, terraces, and other sandy areas associated with some perennial plants and open scrub. The principal threat to this species is loss of open sage scrub. Loss and fragmentation of habitat due to development of floodplains and stream terraces have also greatly contributed to this species' decline. Orange-throated whiptail was detected in open scrub and adjacent washes.

Silvery Legless Lizard (*Anniella pulchra nigra*)

The silvery legless lizard is a state species of special concern. This species has a spotty distribution along the Coast Ranges, Transverse Mountains, and Peninsular Ranges, and along the coast of southern California. Habitat requirements for the silvery legless lizard include loose soil for burrowing (e.g., sand, loam, or leaf mold), moisture, warmth, and plant cover. This species is found where suitable soils occur in a number of vegetation communities, including sparsely vegetated coastal dunes; chaparral; pine-oak woodland; and streamside growth of sycamores, cottonwoods, or oaks. The silvery legless lizard was observed by biologists during focused protocol surveys for arroyo toad.

San Diego Coast Horned Lizard (*Phrynosoma coronatum blainvillii*)

The San Diego coast horned lizard is a state species of special concern. This subspecies is endemic to extreme southwestern California, from Los Angeles County to Baja California. In San Diego County, it is relatively widespread and locally common from the coast to the western

edge of the desert. San Diego horned lizards are most often found on sandy or friable soil with a variety of habitats from sage scrub and chaparral to coniferous and broadleaf woodlands. Habitat requirements include open areas for sunning, bushes for cover, and fine loose soil for rapid burrowing. The San Diego coast horned lizard was observed in riparian/upland-transitional and coastal sage scrub habitat.

Coronado skink (*Eumeces skiltonianus interparietalis*)

The Coronado skink is a state species of special concern. The Coronado skink is a subspecies of the western skink known from San Diego County and Baja California. The known elevational range is sea level to 8,300 feet. The Coronado skink is a habitat generalist in the sense that it occurs in a wide variety of plant associations ranging from coastal sage, chaparral, oak woodlands, piñon-juniper, riparian woodlands, and pine forests. Within these habitats it is restricted to more mesic micro-habitats. This small, secretive reptile is declining as a result of habitat loss due to urban development and agricultural expansion. The Coronado skink was detected in the open scrub and adjacent washes.

Two-striped Garter Snake (*Thamnophis hammondii*)

The two-striped garter snake is a state species of special concern. The species is widespread and locally common in creeks throughout western and central San Diego County but is absent from the desert. This garter snake occurs in aquatic habitats, preferring rocky streams with protected pools, cattle ponds, marshes, vernal pools, and other shallow bodies of water lacking large aquatic predators. Prey includes invertebrates, frogs, tadpoles, and small fish. The two-striped garter snake is active during the day and at dusk, from early spring to late fall. The two-striped garter snake was detected in riparian and wetland habitat.

California Horned Lark (*Eremophila alpestris actia*)

The California horned lark is on the CDFG Watch List. This species occurs along coastal California from Sonoma County to the Mexican border and inland to the San Joaquin Valley and the western Sierra foothills. The California horned lark is a resident of grasslands and open habitats such as agricultural fields, beaches, and disturbed areas. It forages and nests on the ground and forms large flocks during the nonbreeding season. Some migration is believed to take place, but most populations are resident in the coastal lowlands. Horned larks were observed in agricultural fields associated with Vessels Stallion Farm south of the southeastern portion of the BSA.

Cooper’s Hawk (*Accipiter cooperi*)

The Cooper’s hawk is on the CDFG Watch List (nesting). The species is a breeding resident throughout most of the wooded portions of California. In San Diego County, Cooper’s hawks occur both as year-long residents and winter migrants. Cooper’s hawks nest primarily in oak woodlands but occasionally in willows or eucalyptus. The species prefers dense stands of live oak, deciduous riparian woodland, or other forest habitat near water. The Cooper’s hawk preys on small birds, especially young during nesting season, and small mammals. They will also take reptiles and amphibians. Cooper’s hawks were encountered within the central portion of the BSA near the existing SR-76 roadway.

Ferruginous Hawk (*Buteo regalis*)

The ferruginous hawk is on the CDFG Watch List (wintering). The species occurs in interior arid to semiarid lowlands, as well as grasslands and agricultural areas in southwestern Canada, western United States, and northern Mexico. The species is known to winter in San Diego County. A single ferruginous was observed circling, perching, and hunting over pasture fields and adjacent areas on the south side of the San Luis Rey River during wildlife surveys. Because of the known migration and nesting ranges of the species, the ferruginous hawk is considered a rare occurrence in the BSA, and it is highly unlikely that the species nests within the BSA.

Grasshopper Sparrow (*Ammodramus savannarum*)

The grasshopper sparrow is a state species of special concern (nesting). This species occurs in grassland with sparse brush, primarily in coastal lowlands. Grasshopper sparrows are seen mainly from late March through mid-July, when they sing from exposed perches; most or all of the population migrates out of California for the winter. One grasshopper sparrow territory was incidentally observed during focused wildlife surveys in the southwestern portion of the BSA adjacent to a pasture at Vessels Stallion Farm.

Loggerhead Shrike (*Lanius ludovicanus*)

The loggerhead shrike is a state species of special concern (nesting). Within San Diego County, it is a fairly common breeding species and is found in all but the mountain areas of the county. The shrike occupies a variety of habitats, occurring where bushes or trees are scattered on open ground. Loggerhead shrikes were observed incidentally in open grassland or scrub where live oaks or other trees are present, particularly in the southern portion of the BSA along the interface between riparian habitat and agricultural areas (e.g., Vessels Stallion Farm).

Northern Harrier (*Circus cyaneus hudsonius*)

The northern harrier is a state species of special concern (nesting). San Diego County lies at the southwest edge of the harrier's breeding range in North America. Northern harrier is an uncommon to fairly common winter visitor and a rare and local summer resident in the coastal lowlands of San Diego County. Since the mid-1970s, documented nesting locations in San Diego County have included Marine Corps Base Camp Pendleton, Sweetwater River estuary, Otay Ranch, and Proctor Valley. Harriers breed in marshes and grasslands and forage in grasslands, agricultural fields, wetlands, and open coastal sage scrub. Home ranges and breeding territories are variable in size and probably reflect differing habitat resources. This species responds to local prey abundance and can therefore be spatially unpredictable. Northern harriers were observed flying over the central portion of the BSA.

Sharp-shinned Hawk (*Accipiter striatus*)

The sharp-shinned hawk is on the CDFG Watch List (nesting). The species is a winter visitor, distributed over the coastal slope of San Diego County. The habitat of this species encompasses a variety of vegetation communities and land cover types. It requires some amount of dense cover, but this can be localized and scattered in relatively open country. Sharp-shinned hawks were observed during surveys for the proposed project. Suitable migratory and wintering habitat for the species occurs within the BSA. It is unlikely that this species nests within the BSA.

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)

The southern California rufous-crowned sparrow is on the CDFG Watch List. The southern California rufous-crowned sparrow is a resident species in San Diego County and prefers grassy or rocky slopes with open scrub at elevations from sea level to approximately 2,000 feet. Most of the species' population occurs in coastal sage scrub. It forages and nests on the ground, usually near vegetative cover, and maintains year-round territories. Three rufous-crowned sparrow territories were observed in open coastal sage scrub in the central portion of the BSA north of the existing SR-76 roadway.

Vermillion Flycatcher (*Pyrocephalus rubinus*)

The vermillion flycatcher is a state species of special concern (nesting). The species is associated with low-lying, open riparian areas with accessible water and mesquite, cottonwoods, or willows. The vermillion flycatcher is a summer visitor to the southwestern United States. The species is known to breed in the Sonoran and Mojave deserts. One individual male vermillion flycatcher was observed perched on the fence at Vessels Stallion Farm. This species was not observed breeding within the BSA. It is likely that the individual observed was migrating through the BSA. Because of the known migration and nesting ranges of the species, the species is considered a rare occurrence in the BSA.

White-faced Ibis (*Plegadis chihi*)

The white-faced ibis is on the CDFG Watch List (rookery site). The white-faced ibis is an uncommon winter migrant and visitor and a rare summer resident of San Diego County. The range of the species extends from Oregon, south to Argentina, and southeast to Louisiana. It frequents freshwater lagoons, rivers, lakes, wet agricultural fields, and occasionally salt marshes. Nesting typically takes place in the northern summer range of the species but has been reported from some of the larger wetland areas of San Diego County. The white-faced ibis was encountered within the central portion of the BSA on Vessels Stallion Farm foraging around human-made ponds and agricultural fields. Several dozen adults and juveniles were observed frequently in this area. Individuals were also frequently observed flying over the BSA along the riparian corridor. The species is known to nest within riparian habitat in the San Luis Rey River in the BSA. Important foraging habitat for this species occurs within the BSA in agricultural areas associated with Vessels Stallion Farm.

White-tailed Kite (*Elanus leucurus*)

The white-tailed kite is a state fully protected species. White-tailed kites are resident in southern Texas and California; at scattered locations in Washington, Oregon, and Florida; and from Mexico to South America. In southern California, kites are widespread except in the Anza-Borrego Desert. While this species is commonly observed hunting within savanna, open woodlands, marshes, grasslands, and agricultural fields, they are known to nest almost exclusively in association with watercourses. Nests are typically placed in the crowns of oaks or other densely foliaged trees. In San Diego County, the nesting season lasts from February through fledging in June. White-tailed kites were occasionally observed flying over the BSA and were observed perched in the central portion of the BSA adjacent to riparian habitat on the south side of the San Luis Rey River.

Yellow-breasted Chat (*Icteria virens*)

The yellow-breasted chat is a state species of special concern (nesting). This species breeds across the central and eastern United States and southern Canada from South Dakota to New Hampshire and southward to eastern Texas and northern Florida. It also occurs in scattered regions across the western United States from southern Canada to very northern Mexico. In San Diego County, nest building typically occurs in May and fledging is completed by August. In California, chats require dense riparian thickets associated with watercourses, saturated soils, or standing water (lakes or ponds). They typically occur in riparian woodland/scrub with dense undergrowth. In San Diego County, this species occurs in the coastal lowlands and is strongly concentrated in the northwest portion of the county (i.e., Santa Margarita River and San Luis Rey River). Comparable to other breeding riparian passerines, the chat is frequently parasitized by the brown-headed cowbird. Yellow-breasted chats were detected throughout riparian and wetland habitat. This species is expected to nest within suitable riparian habitat throughout the BSA.

Yellow Warbler (*Dendroica petechia brewsteri*)

The yellow warbler (*brewsteri* subspecies) is a state species of special concern (nesting). The yellow warbler breeds from northern Alaska and Canada southward to the middle United States and in the western United States southward into Mexico. This warbler winters in Mexico, and Central and South America. Nest building may occur as early as April in San Diego County, with fledglings reaching independence by August. This species occurs most commonly in riparian woodlands dominated by willows. The yellow warbler is a frequent host of the brown-headed cowbird. Yellow warblers were frequently detected by biologists throughout riparian and wetland habitat.

American Badger (*Taxidea taxus*)

The American badger is a state species of special concern. The badger is an uncommon resident of level, open areas in grasslands, agricultural areas, and open shrub habitats. It digs large burrows in dry, friable soils and feeds mainly on ground burrowing mammals: ground squirrels, gophers, rats, mice, etc. Badgers are primarily active during the day but may become more nocturnal in proximity to humans. The home range of badgers has been measured at 1,327 to 1,549 acres for males and 338 to 751 acres for females. American badgers were incidentally observed south of the existing SR-76 roadway in riparian/upland-transitional habitat. Thus, this species is expected to occur within suitable riparian/upland-transitional, coastal sage scrub, and grassland habitat throughout the BSA.

Mountain Lion (*Felis concolor*)

The mountain lion is a state legally protected species. Mountain lions typically occur in remote hilly or mountainous areas. They require open water sources such as streams or rock pools, large foraging areas, and rocky shelters or caves for denning. The home range of mountain lions can cover areas as large as 25 to 96 square miles for males and 3 to 12 square miles for females, with a typical minimum home range of 15 square miles per individual. Mountain lions are chiefly nocturnal but may also be active during the day if undisturbed. This cat is active year-round and may travel up to 25 miles per night in search of food. Prey includes mule deer, rabbits, rodents, coyotes, snakes, and occasionally livestock. Because of its large home range size, this species is susceptible to increased human pressures. Mountain lion sightings occurred multiple times during surveys on the southern edge of the San Luis Rey River in riparian-

transitional habitat. Mountain lion sign was also observed regularly on both the north and south sides of the San Luis Rey River in riparian-upland transitional habitat, south of the existing SR-76 roadway.

San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

The northwestern San Diego pocket mouse is a state species of special concern and occurs on the coastal slope of southern California and Baja California Norte, Mexico. Its range extends as far north as Claremont and San Bernardino and as far east as Banning and Jacumba. It is often associated with open, arid habitats including coastal sage scrub, annual grassland, and desert habitat. One San Diego pocket mouse was observed as roadkill along the existing SR-76 roadway.

Southern Mule Deer (*Odocoileus hemionus fulginata*)

The southern mule deer is considered a regulated harvest species by CDFG. The range of the southern mule deer extends throughout the western United States. While the southern mule deer occupies almost all types of habitat within its range, it prefers arid, open areas and rocky hillsides. The mating season for southern mule deer reaches its peak in November and December, as antlered stags round up females and fight for their possession. Males and females mix freely while traveling in groups during winter months. Southern mule deer in the arid southwest may migrate in response to rainfall patterns. Mule deer were observed incidentally, although infrequently, throughout the BSA in riparian/upland-transitional and upland habitats. It is likely that the mule deer uses the San Luis Rey River corridor and associated upland habitat to the south of the river on a regular basis for regional and local movement. The species was not observed in any of the existing undercrossings during the wildlife movement study. However, it is likely that the mule deer attempts to cross the existing SR-76 roadway at grade level.

Fishery Resources

Of the 13 species of fish that may be found within the project limits, 10 species are nonnative. This is primarily a result of unauthorized introductions of these fish at Lake Henshaw, which have likely been transported to the river during water flow releases. The exceptions to this are the introduction of mosquito fish for mosquito abatement, and historic brown trout stocking in the Pauma Creek area. Native fish that potentially may be found within the San Luis Rey River include resident threespine stickleback (*Gasterosteus aculeatus microcephalus*), arroyo chub (*Gila orcuttii*), and Southern California steelhead (*Oncorhynchus mykiss irideus*). The potential for Southern California steelhead occurrence is discussed in Section 3.24.

3.23.3 Environmental Consequences

With either proposed alignment alternative, direct, indirect, permanent, and temporary impacts would occur to suitable habitat that supports special-status wildlife species. Both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative would result in direct and indirect impacts to special-status species from the permanent loss of species individuals during construction activities; temporary increase in erosion, sedimentation, and pollution runoff; and the temporary or permanent loss of habitat necessary to support these species, both during construction activities and after the expansion and realignment of the highway, respectively. Indirect impacts would also occur from an increase in noise levels and artificial night lighting during construction activities.

Both alignment alternatives contain riparian and upland vegetation communities that sensitive wildlife species are known to utilize for part or all of their lifecycles. Riparian vegetation in the BSA is known to support sensitive species including the western spadefoot toad, two-striped garter snake, Cooper's hawk, yellow warbler, yellow breasted chat, white-faced ibis, and mountain lion. Upland vegetation in the BSA is known to support sensitive species including the silvery legless lizard, San Diego coast horned lizard, orange-throated whiptail, Coronado skink, northern red-diamond rattlesnake, northern harrier, white-tailed kite, California horned lark, loggerhead shrike, grasshopper sparrow, southern California rufous-crowned sparrow, American badger, southern mule deer, and San Diego pocket mouse. There were an additional four species detected in the BSA during migration or wintering, but they are not likely to breed within the BSA. These include the Swainson's hawk, ferruginous hawk, sharp-shinned hawk, and vermillion flycatcher. Consequences on the fishery resources, with either alternative, will include permanent, temporary and indirect impacts to instream habitat, freshwater marsh, disturbed wetlands, and associated riparian areas. The acreages of impacts to these habitats are provided in Section 3.20.

Impacts to Southern California steelhead individuals are not anticipated. No additional impediments to fish movement would occur as a result of this project, as no partial or complete barriers would be constructed. No bridges are being constructed across the river that would constrict the flow. Large increases or decreases to water velocity are not anticipated. The project may have a net improvement to water quality, as Caltrans would treat 66 percent of roadway runoff, consisting of 56.3 acres of treated impervious surface, where no such treatment currently exists. Similarly, the interchange would treat 54 percent of roadway runoff and consist of 13.9 acres of treated impervious surface, where no such treatment presently exists.

The Existing Alignment Alternative (Preferred Alternative) would result in more permanent and temporary direct impacts to sensitive riparian and wetland vegetation communities that support these species. The Existing Alignment Alternative (Preferred Alternative) would also result in more indirect impacts to sensitive riparian and wetland, and upland vegetation communities that support these species. The Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative would result in similar permanent and temporary direct impacts to sensitive upland vegetation communities. Permanent and temporary indirect impacts, including habitat fragmentation, increased noise levels, human intrusion, and night time lighting would be greater with the Southern Alignment Alternative. Permanent indirect impacts resulting from the Southern Alignment Alternative would be twice that of the Existing Alignment Alternative (Preferred Alternative).

3.23.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance, minimization, and mitigation measures for the sensitive wildlife species discussed in this section would be largely habitat based and would include those habitat-based measures outlined in Sections 3.20, Natural Communities, 3.21, Wetlands and Other Waters, and 3.22, Plant Species. Mitigation for impacts to species habitats would be met through the proposed mitigation measures for Diegan coastal sage scrub, riparian, and wetland vegetation. Tables 3.20-2, 3.20-4, 3.20-5, 3.21-3, and 3.21-4 identify the range of proposed mitigation ratios and locations. Additional avoidance and mitigation measures for impacts to all sensitive species and migratory birds are described below. A complete list of all avoidance, minimization, and/or mitigation measures that will be implemented for impacts to wildlife species is included in the USFWS Biological Opinion for this project (Appendix K). Measures proposed in the Biological Opinion (Appendix K) for the SR-76 South Mission to I-15 Highway Improvement Project include, but are not limited to, the following measures discussed below.

All vegetation within the construction limits would be cleared outside the bird and arroyo toad breeding season (e.g., coastal California gnatcatcher, February 15 through August 31; least Bell's vireo, March 15 through September 15; southwestern willow flycatcher May 1 through September 15; arroyo toad, March 15 through July 31) to avoid impacts to nesting species. If activities must occur during this timeframe, a mandatory preconstruction survey by a qualified biologist would be conducted to ensure that no nesting birds are present within the proposed work area. Should nest sites be located, appropriate measures may include designation of the location as an ESA and delaying/restricting project activities until nesting/fledging is completed.

Permanent noise effects from operations of either alignment alternative would be mitigated through compensatory mitigation as determined through consultation and discussions with state and federal wildlife agencies. Temporary noise effects from pile driving and blasting associated with construction of the alignment alternatives would be conducted September 16 through February 14, which is outside of the bird breeding season. When construction activities occur during the breeding season, temporary noise walls would be installed and maintained around the perimeter of the construction limits, as determined necessary by the project biologist, to minimize effects to nesting animal species.

Pile driving associated with construction of the San Luis Rey River Bridge (Southern Alignment Alternative) would only be conducted between September 16 and February 14 to reduce the effects of noise on nesting and breeding birds within the project vicinity.

During any nighttime construction, all project lighting would be directed at the roadway or the construction site and away from sensitive habitats. Light glare shields may also be used to reduce the extent of illumination onto adjoining areas.

3.24 THREATENED AND ENDANGERED SPECIES

3.24.1 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 FHWA, are required to consult with USFWS and NOAA Fisheries Service 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 statement. Section 3 of the 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. The 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. CDFG is the agency responsible for implementing the 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.” The CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For species listed under both the FESA and CESA 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.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

3.24.2 Affected Environment

The following reports were completed in support of this section of the document:

- State Route 76 Melrose to South Mission Highway Improvement Project Natural Environment Study (November 2008)
- State Route 76 South Mission to I-15 Highway Improvement Project Natural Environmental Study (August 2010)
- State Route 76 South Mission to I-15 Highway Improvement Project Wildlife Movement Study (August 2009)

Consultation with USFWS includes the following:

- Lists of Endangered and Threatened Species in the area of the proposed expansion of the State Route 76 East Highway Improvement Project, San Diego California, was requested and received in 2008 and 2010.
- Concurrence on purpose and need for the proposed SR-76 South Mission Road to I-15 project was discussed and received in 2009.
- Informal Section 7 Consultation for Geotechnical Borings at Various Locations along State Route 76, from South Mission Road to Interstate 15, San Diego County, California occurred in 2009.
- Concurrence on selection criteria for project alternatives and range of alternatives for the proposed SR-76 South Mission Road to I-15 project was received in 2010.
- NEPA/404 MOU Resource Agency Meetings occurred in May and July 2009.
- SR-76 Mission to I-15 resource agency permit related coordination meetings have occurred during June and July 2010.
- USFWS issued a Biological Opinion for the proposed Existing Alignment Alternative (Preferred Alternative) on September 22, 2011.

The distributions of the species discussed below are depicted in Figures 3.22-1, 3.22-2, and 3.24-1a through 3.24-8b. Species accounts for the FESA- and/or CESA-listed plant species that were evaluated but not detected within the BSA are included in Appendix F of the NES.

San Diego Ambrosia (*Ambrosia pumila*)

San Diego ambrosia was listed as endangered by USFWS in July 2002 (see Figure 5.4-13). USFWS designated critical habitat for the San Diego ambrosia in 2010. San Diego ambrosia is historically known to occur in creek beds, seasonally dry drainages, and floodplains. However, the species is quite adaptable and is also associated with disturbed areas within chaparral, coastal scrub, valley and foothill grasslands, and vernal pool habitats. The locations of San Diego ambrosia occurrences detected within the BSA during surveys are displayed in Figures 3.22-1 and 3.22-2 as polygons. The polygons represent the population areas. Plant counts for San Diego ambrosia polygons were quite variable across survey years and across different polygons, ranging from low (100s) to very high (100,000s). A summary of the survey results for San Diego ambrosia is presented in Table 3.24-1.

San Diego ambrosia is located in several areas within the BSA, predominantly north of the existing SR-76 roadway. A small portion of two San Diego ambrosia populations overlaps with the Existing Alignment Alternative (Preferred Alternative) footprint. No detected populations of San Diego ambrosia overlap with the Southern Alignment Alternative footprint. There are approximately 1.22 acres of area occupied by San Diego ambrosia within the BSA. Occupied area does not include any buffer around detected San Diego ambrosia individuals.

Table 3.24-1. Survey Results for San Diego Ambrosia

Polygon Number		Area (m^2 [acres])	Average Density (ramets/m^2)[a]	Population Estimate
2006				
1		2,226.60 (0.55)	20.04	44,621
2		435.88 (0.11)	42.60	18,569
3		458.50 (0.11)	86.20	15,809
2006 TOTAL		**3,120.98 (0.77)[b]**	**25.31**	**78,999**
2007				
Resurvey of 2006 Locations	1	2,523.27 (0.62)	82.50	208,170
		17.41 (0.004)	96.50	1,680
	2	1,042.93 (0.26)	79.00	82,391
	3	261.13 (0.06)	66.50	17,365
	Subtotal	*3,844.74 (0.94)*	*80.53*	*309,606*
New Locations	4	74.25 (0.02)	134.83	10,012
	5	37.14 (0.009)	159.00	5,906
	6	31.98 (0.007)	44.00	1,407
	7	28.87 (0.007)	16.55	478
	8	28.21 (0.007)	16.55	467
	9	16.37 (0.004)	73.50	1,203
	10	12.72 (0.003)	53.00	674
	11	2.00 (T)[c]	30.00	60
	Subtotal	*231.54 (0.05)*	*88.03*	*20,207*
2007 TOTAL		**4,076.28 (0.99)[b]**	**80.95**	**329,813**
2008				
New Locations	12	2.00 (T)[c]	60.5	121
	13	1.00 (T)[c]	3.00	3
2008 TOTAL		**3.00 (T)[c]**	**41.33**	**124**
Grand Total		**1.22 ac**		**329,937**

[a] Average density values are weighted by area (square meters [m^2]).
[b] The total area occupied by San Diego Ambrosia within the BSA is 1.22 acres. The sum of all three survey years is greater than 1.22 acres due to 0.54 acre of overlap between 2006 and 2007 surveys.
[c] T = Trace

Animal Species

Four federally listed species are known to breed within the BSA: arroyo toad (*Bufo californicus*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo belli pusillus*), and coastal California gnatcatcher (*Polioptila californica californica*). All four of these species were included on the USFWS list as species potentially occurring within the project area (see Figure 5.4-13) and in the Biological Opinion (Appendix K).

In addition, the federally and state protected golden eagle and the Swainson's hawk (*Buteo swainsoni*), listed as endangered under the CESA, were detected within the BSA. One federally listed species, Stephens' kangaroo rat (*Dipodomys stephensi*), was not detected but was determined to have a high probability to occur. Species accounts for FESA- and CESA-listed animals detected or with high probability to occur within the BSA are provided below.

Arroyo Toad (*Bufo californicus*)

The arroyo toad was listed as federally endangered by USFWS in 1994 and is a state species of special concern. USFWS first designated critical habitat for the arroyo toad in 2001 and it was most recently revised in 2011. Critical habitat for the federally listed arroyo toad occurs within the BSA (Figures 3.24-9 and 3.24-10). Arroyo toads are distributed in the semiarid parts of the southwest from near Santa Margarita in San Luis Obispo County in the north to northwestern Baja California in the south. This species of toad has highly specialized habitat requirements and is typically associated with gravelly or sandy washes, stream and river banks, and arroyos. Adult toads spend most of the year in burrows in upland habitat near washes and streams. Nonbreeding habitat includes sage scrub, mixed chaparral, Joshua tree woodland, and sagebrush habitats.

Breeding activity occurs from March 15 through July 31 depending on temperatures and precipitation. Breeding occurs in quiet, clear backwaters of streams as waters recede from the floods of the wet season. Males call from suitable breeding habitat at night, and the call is a musical trill emitted in 10-second bursts. Eggs are laid on the bottom of the shallow pools, usually in tangled strings of one to three rows. The eggs are sensitive to siltation and require good water quality. Because the eggs are laid in shallow water and are not anchored or attached to the substrate, they are susceptible to rapid changes in stream flow that can strand them dry or wash them downstream. The tadpoles are typically mottled or spotted black and brown, and reach a maximum length of about 1.5 inches. Tadpoles are solitary and extremely cryptic. Metamorphosed toadlets bask during the day on sandy or gravelly beaches in the late summer before beginning the subterranean life of the adults. The adults typically spend the majority of the year in burrows, are nocturnal, and are occasionally found at night foraging on open, sandy areas around the drainage. Burrows are shallow and are usually located in sandy soils on terraces adjacent to streams. There is evidence that arroyo toads will disperse as far as 3,540 feet out of a stream course into a variety of upland habitats.

Arroyo toads were observed by biologists during focused protocol surveys in 2006 and 2007 throughout wetland and riparian habitat in the BSA (Figures 3.24-1a through 3.24-2b). The majority of toads observed were seen on the north side of the San Luis Rey River in sandy substrate along existing game trails and equestrian trails. Arroyo toads were also observed calling and breeding in the river in the central portion of the BSA. Arroyo toad tadpoles were observed infrequently in pools of the San Luis Rey River. On the south side of the San Luis Rey River, arroyo toads were observed, but in lower numbers. This may be in part because of the dense nonnative grassland cover in the riparian-transitional zone on the south side of the river as opposed to the more open cover with more extensive sand bars and sandy trails on the north side.

Arroyo toad aestivation habitat was identified in upland vegetation communities and other land cover types north and south of the riverbed, north of the Existing Alignment Alternative (Preferred Alternative), and south of the Southern Alignment Alternative (Figures 3.24-1a through 3.24-2b). Aestivation habitat was mapped in addition to breeding habitat in areas that contain fine friable soils suitable for burrowing adult toads and upland vegetation communities and land cover types including coastal sage scrub, grasslands, oak woodlands, disturbed habitat, agriculture, and some pastures/fields. The total acreage of suitable arroyo toad habitat in the BSA is approximately 1,534 acres.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

The southwestern willow flycatcher was federally listed as endangered in 1995 and state listed as endangered in 1990. USFWS designated critical habitat for the southwestern willow flycatcher in 2005. This subspecies of willow flycatcher is a summer breeding resident in riparian habitats in southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and northwestern Mexico. In San Diego County, only two substantial breeding populations are known to remain: along the Santa Margarita River and along the upper San Luis Rey River.

The southwestern willow flycatcher is restricted to dense riparian woodlands of willow, cottonwood, and other deciduous trees and shrubs. The riparian habitat of this species tends to be rare, isolated, small, and/or in linear patches, separated by vast expanses of arid lands.

Spring migration of the southwestern willow flycatcher is relatively late, beginning in early May and extending through June. Another subspecies (*E. t. brewsteri*) that breeds to the north in the northern Sierra Nevada and the Cascade Range migrates through San Diego between mid-May and mid-June. There is a period of overlapping occurrence in San Diego County riparian habitats for these two very-similar-looking subspecies during spring and fall migration. Fall migration of both subspecies occurs rather early, from August through mid-October. Egg laying by the southwestern willow flycatcher occurs in San Diego County from the end of May through the end of June. Dense willow thickets are required for nesting, and nests are often near standing water. Willow flycatchers hunt for insects from low exposed perches, flying out to catch the insects in midair.

Southwestern willow flycatchers were detected by biologists during 2006 and 2007 focused protocol surveys (Figures 3.24-3a through 3.24-4b). Southwestern willow flycatchers were observed in riparian and wetland habitat throughout the BSA. The species was confirmed as nesting in the BSA; approximately eight breeding flycatcher territories were identified throughout the BSA during 2006–2007 protocol surveys. The total acreage of suitable southwestern willow flycatcher habitat in the BSA is approximately 660 acres.

Least Bell's Vireo (*Vireo belli pusillus*)

The least Bell's vireo was federally listed as endangered in 1986 and state listed as endangered in 1980. USFWS designated critical habitat for the least Bell's vireo in 1994.

The least Bell's vireo is the westernmost subspecies of the Bell's vireo. The least Bell's vireo breeds from southern California and southern Nevada to central North Dakota, Iowa, Indiana, and Arkansas southward to northern Mexico; the subspecies winters in southern Mexico.

The least Bell's vireo breeding season extends from March through September. During the breeding season, the least Bell's vireo is restricted to riparian woodland and riparian scrub. In San Diego County, it occurs mainly in the coastal lowlands, rarely up to 3,000 feet in elevation. Territory size ranges from 0.5 to 7.5 acres and there is evidence of high site fidelity among adults. Early to mid-successional riparian habitat is typically used for nesting by this vireo because it supports the dense shrub cover required for nest concealment, and a structurally diverse canopy for foraging.

Least Bell's vireos were detected by biologists during 2006 focused protocol surveys, and incidentally during other survey efforts in 2007 and 2008 within the BSA (Figures 3.24-5a through 3.24-6b). Least Bell's vireos were observed in riparian and wetland habitat throughout

the BSA. The species is known to nest within the BSA; approximately 26 breeding territories of least Bell's vireo were identified throughout the BSA during 2006 protocol surveys. The total acreage of suitable least Bell's vireo habitat in the BSA is approximately 693 acres.

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher was listed as federally threatened in 1993 and is a state species of special concern. USFWS first designated critical habitat for the coastal California gnatcatcher in 2000 and issued a revised critical habitat designation in 2007.

The species is a local and uncommon year-round resident of southern California, with a breeding season that extends from late February through August. The coastal California gnatcatcher is declining proportionately to the continued loss of coastal sage scrub habitat in the six southern California counties (San Bernardino, Ventura, Los Angeles, Orange, San Diego, and Riverside) located within the coastal plain. Habitat preferences in San Diego County consist of Diegan coastal sage scrub dominated by California sagebrush and flat-topped buckwheat, which are the primary plants used by coastal California gnatcatchers when foraging for insects. The species inhabits coastal sage scrub vegetation below 2,500 feet in elevation and generally below 1,000 feet in elevation along the coastal slope; it generally avoids steep slopes of greater than 25 percent and dense, tall vegetation for nesting. The territory size requirements of the coastal California gnatcatcher vary with habitat quality. Documented home ranges have varied from 6 to 45 acres in San Diego County.

Coastal California gnatcatchers were detected by biologists during focused protocol surveys from 2006 through 2008 (Figures 3.24-7a through 3.24-8b). Coastal California gnatcatchers were observed in coastal sage scrub habitat in the northeastern portion of the BSA on the north side of the existing SR-76 roadway. Additional gnatcatchers were observed in the southwestern portion of the BSA on the south side of Lilac Road and in the area associated with the I-15 interchange. The species is known to nest in the BSA. Protocol surveys from 2006 through 2008 identified eight distinct breeding territories in the BSA. The total acreage of suitable coastal California gnatcatcher habitat in the BSA is approximately 109 acres.

Golden Eagle (*Aquila chrysaetos canadensis*)

The golden eagle is protected under the federal Bald and Golden Eagle Protection Act (16 USC 668-668c), is designated as a fully protected species by CDFG, and is on the CDFG Watch List (nesting and wintering). This species is an uncommon resident throughout San Diego County. Golden eagles forage in grassy and open shrubby habitats and nest primarily on cliffs, with secondary use of large trees (e.g., oak and sycamore). Golden eagles were occasionally observed flying over the BSA during focused wildlife surveys (Figures 3.22-1 and 3.22-2). This species was not observed nesting within the BSA but is expected to forage within suitable coastal sage scrub and grassland habitat throughout the BSA.

Stephens' Kangaroo Rat (*Dipodomys stephensi*)

Stephens' kangaroo rat was federally listed as endangered in 1988 and state listed as threatened in 1971. Critical habitat for the species has not been designated. Stephens' kangaroo rat is known from 16 localities in and around San Jacinto Valley from Riverside, Riverside County, south to the vicinity of Vista, San Diego County. The number of verified localities has declined over the past half century, due mainly to urbanization and cultivation of suitable habitat. Stephens' kangaroo rat occurs primarily in annual and perennial grassland

habitats but may occur in coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas. The species' preferred forage plants include buckwheat, chamise, brome grasses, and filaree. Stephens' kangaroo rat was not detected within the BSA, but the probability of occurrence for the species is considered high. Suitable habitat for the Stephens' kangaroo rat occurs within the BSA, and the species has been detected less than 2 miles from the BSA.

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk was state listed as threatened in 1983. The species occurs in open grasslands, prairies, farmlands, and deserts that have some trees for nesting. The species summers in the western half of North America and winters in South America. In San Diego County, the species is migratory; the last known nesting occurrence in the County was recorded in 1933. A single Swainson's hawk was observed circling over the San Luis Rey River Valley within the BSA during a survey conducted in spring 2006 (Figures 3.22-1 and 3.22-2). Suitable foraging habitat occurs throughout much of the BSA. This species was not observed breeding within the BSA. It is likely that the individual observed was migrating through the BSA. Because of the known migration and nesting ranges of the species, the Swainson's hawk is considered a rare occurrence in the BSA, and it is highly unlikely that the species nests within the BSA.

Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis*)

The western yellow-billed cuckoo was state listed as endangered in 1988, and was determined to be a federal candidate for listing in 2001. The species winters in South America. Its primary habitat association is southern cottonwood-willow riparian forest, nesting and foraging within the riparian canopy. Canopy cover is typically dense, and large patch sizes (generally greater than 50 acres) are typically required. Two cuckoos were observed in the Morrison mitigation site, along the San Luis Rey River, on three separate occasions in July 2011.

Southern California Steelhead (Oncorhynchus mykiss *irideus*)

The Southern California Steelhead Distinct Population Segment (DPS) was federally listed endangered in 1997; this status was reaffirmed in 2006. Critical habitat for the DPS was designated in 2005. The DPS includes all naturally spawned anadromous steelhead populations below natural and man-made impassable barriers in southwestern California. This includes streams as far north as the Santa Maria River, and south to the U.S. border with Mexico. This species was not observed onsite. A steelhead was found in 2007 in the lower San Luis Rey River by CDFG fisheries surveyors (CDFG 2007). One individual was observed 6.7 miles upstream from the mouth of the river, about 0.5 mile east of College Avenue in Oceanside. Barriers to migration exist between the location of the observation and the proposed project site. Current barriers to fish passage are not found within the proposed project area and further barriers would not result from this project. There have been no documented detections of steelhead in or near the project area. However, because the river is dynamic, and flow levels change based on rainfall and storm events, there is potential for this species to occur onsite.

The NMFS letter dated June 8, 2011, concurs with the Caltrans determination that the proposed project is not likely to adversely affect steelhead or critical habitat for this species within the San Luis Rey River. Due to Caltrans' minimization, avoidance and mitigation efforts, direct effects to steelhead are not expected, and "indirect effects to steelhead and aquatic habitat are expected to be discountable" (See Chapter 5 NMFS Section 7 Concurrence letter). Adverse impacts to the river channel, floodplain, and floodplain connectivity are not expected. Impacts to riparian vegetation are expected to be discountable.

Critical Habitat

Pursuant to the FESA, Section 3, critical habitat is defined as follows:

i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of the FESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and

ii) Specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 1533 of the FESA, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Critical habitat does not consist solely of vegetation communities typically associated with potential occupancy by a particular threatened or endangered species, but also includes other physical and biological variables. Such variables may include areas that were previously suitable for the species but that have undergone type conversions (e.g., riparian vegetation converted into agriculture) or have been developed. These areas may be designated as critical habitat due to the potential for reclamation or reconversion (restoration) into suitable habitat.

The project area is located within designated final critical habitat for San Diego ambrosia, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and arroyo toad, designated by USFWS November 30, 2010; December 19, 2007; February 2, 1994; October 19, 2005, and February 9, 2011, respectively (Figures 3.24-9 and 3.24-10).

The majority of the project area is located within Unit 5 of USFWS designated critical habitat for the coastal California gnatcatcher. These lands consist of designated core gnatcatcher populations and sage scrub habitats identified as high or moderate value. These units provide connectivity to adjacent gnatcatcher critical habitat units and constitute the primary inland linkage between San Diego gnatcatcher populations and those in southwestern Riverside County (Unit 10). The designated critical habitat for the coastal California gnatcatcher encompasses much of the eastern half of the BSA. In addition, a small section of the southwesternmost portion of the BSA is designated critical habitat for the coastal California gnatcatcher. Approximately 711 acres of critical habitat for the coastal California gnatcatcher occur within the BSA (excluding the overlap area).

The San Luis Rey River is also one of 10 critical habitat areas designated for the least Bell's vireo (Figures 3.24-9 and 3.24-10). The Least Bell's vireo critical habitat in the project area stretches from Pala southwestward along the San Luis Rey River nearly to I-5. It constitutes the longest section of critical vireo habitat within San Diego County. Habitat occurs that may be critical to the continued existence of the species in the form of suitable breeding habitat, habitat that could become suitable through restoration or natural recruitment, and upland buffer/transition zones. Least Bell's vireo critical habitat includes riparian habitats through the entire length of the project area. The designated critical habitat for the least Bell's vireo encompasses the San Luis Rey River bed and extends south of the riverbed. Approximately 1,583 acres of critical habitat for the least Bell's vireo occur within the BSA (excluding the overlap area).

The segment of the San Luis Rey River within the project area is also located in the San Diego Management Unit of USFWS designated critical habitat for the southwestern willow flycatcher

(Figures 3.24-9 and 3.24-10). The San Luis Rey River is one of the longest rivers within this unit, containing the largest number of flycatcher territories. The San Luis Rey River, collectively with the smaller tributaries also designated as critical habitat, contains essential habitat features for breeding, nonbreeding, territorial, migrating, and dispersing southwestern willow flycatchers, and helps to provide metapopulation stability, population growth, gene flow, connectivity, and protection against catastrophic losses. The designated critical habitat for the southwestern willow flycatcher is coincident with the San Luis Rey River bed and composes approximately 760 acres of the BSA (excluding the overlap area).

Designated habitat for the federally listed San Diego ambrosia occurs within the BSA, located north of the existing SR-76 near Calle de la Vuelta (Figure 3.24-9).

Designated critical habitat for the federally listed arroyo toad occurs within the BSA (Figures 3.24-9 and 3.24-10). The critical habitat for the arroyo toad is coincident with the San Luis Rey River bed and composes approximately 1,912 acres of the BSA.

3.24.3 Environmental Consequences

Plant Species

Existing Alignment Alternative (Preferred Alternative)

While part of the San Diego ambrosia population falls within the temporary direct impact area and outside of the permanent direct impact area, it is anticipated that temporary disturbance from construction would have permanent direct impacts to this species. Construction of the Existing Alignment Alternative (Preferred Alternative) would result in permanent direct impacts to less than 0.01 acre (approximately 2,633 ramets) of occupied San Diego ambrosia habitat (Table 3.24-2; Figure 3.22-1). These impacts would result from access and grading. The State Route 76 South Mission to Interstate 15 Highway Improvement Project Biological Assessment (August 2011) concluded the Existing Alignment Alternative (Preferred Alternative) may affect, and is likely to adversely affect San Diego ambrosia. Per the USFWS Biological Opinion for this project (Appendix K), the proposed action is not likely to jeopardize the continued existence of this species and is not likely to result in the destruction or adverse modification of designated critical habitat for this species with implementation of the proposed avoidance, minimization, and/or mitigation measures.

Table 3.24-2. Impacts to San Diego Ambrosia

	Existing Alignment Alternative (Preferred Alternative)			Southern Alignment Alternative					
	Project Footprint			Project Footprint			Existing SR-76 Upgrade		
	Direct Impacts (acres)		Indirect Impacts (acres)	Direct Impacts (acres)		Indirect Impacts (acres)	Direct Impacts (acres)		Indirect Impacts (acres)
Species	Perm.	Temp.		Perm	Temp		Perm	Temp	
San Diego Ambrosia-Occupied Habitat	<0.01	0	0	0	0	0	0.01	0	1.19

Southern Alignment Alternative

The Southern Alignment Alternative is not anticipated to impact San Diego ambrosia Therefore, it is anticipated that the project would have "no effect" to these species. A part of the San Diego ambrosia population falls within the temporary direct impact area for the County's upgrade of the current SR-76 and outside of the permanent direct impact area for the County's upgrade. However, it is anticipated that temporary disturbance from construction would have permanent direct impacts to this species. The County's upgrade of the existing SR-76 roadway is estimated to permanently directly impact an additional 0.01 acre of ambrosia. Indirect impacts would occur to all mapped areas (1.19 acres) of San Diego ambrosia within the BSA.

Animal Species

No impacts are anticipated to occur to the golden eagle, Swainson's hawk, western yellow-billed cuckoo, Stephens' kangaroo rat, or southern California steelhead. Stephens' kangaroo rat or southern California steelhead have not been detected within the BSA. The raptors were seen foraging and flying over the BSA and are unlikely to be nesting within the area. The yellow-billed cuckoo was located more than 300 feet beyond the indirect impact area. Therefore, it is anticipated that the project would have "no effect" to these species.

Impacts to species individuals are summarized in Table 3.24-3. Anticipated impacts to habitat are summarized in Tables 3.20-2 and 3.24-4. Indirect impacts to occupied habitat for each of these species from both alignment alternatives are summarized in Tables 3.20-2 and 3.24-4.

Table 3.24-3. Direct Impacts to Federally Listed Wildlife Species (Number of Pairs or Breeding Males Observed)[a]

	Existing Alignment Alternative (Preferred Alternative)			Southern Alignment Alternative				
	Project Footprint			Project Footprint			County's Upgrade of Existing SR-76	
Species	Perm.	Temp.	Indirect	Perm.	Temp.	Indirect	Perm.	Temp.
Arroyo Toad[b]	4	2	8	0	0	1	0	0
Southwestern Willow Flycatcher	0	0	4 (2 pairs)	0	0	1 (territory)	0	0
Least Bell's Vireo	6 (3 pairs)	0	11 (~6 territories)	2 (1 pair)	0	1 (territory)	3 (1 Pair and 1 territory)	0
Coastal California Gnatcatcher	2 (1 pair)	0	2 (1 pair)	0	0	2 (1 pair)	0	0

[a] Number of pairs or breeding males impacted is estimated based on mapped locations of individual observations during surveys and is not a reflection of the number of breeding territories impacted. Therefore, calculation of the number of individuals impacted per alignment may not be a realistic representation of actual impacts to number of territories given the linear footprints of each alignment.

[b] It should be noted that numbers provided for arroyo toads may not be a realistic representation of actual impacts. Because toads do not have breeding territories like birds, the number of toad individuals impacted is based solely on mapped observations of toads during any given survey day. Because toads are mobile and were frequently mapped while in transit to breeding pools, the number of toads occurring within an alignment footprint could vary substantially from day to day.

Table 3.24-4. Impacts to Federally Designated Critical Habitat (Acres)*

	Existing Alignment Alternative (Preferred Alternative)			Southern Alignment Alternative				
	Project Footprint			Project Footprint			County's Upgrade of Existing SR-76	
Species	Perm.	Temp.	Indirect	Perm.	Temp.	Indirect	Perm.	Temp.
Arroyo Toad	77.98	64.27	102.07	90.39	64.14	235.2	34.90	11.14
Southwestern Willow Flycatcher	37.13	10.93	56.36	16.36	5.96	56.80	9.00	4.06
Least Bell's Vireo	63.15	32.60	73.72	33.87	40.88	218.89	23.71	6.13
Coastal California Gnatcatcher	41.79	30.19	31.92	52.94	36.19	70.97	12.55	4.25
San Diego Ambrosia	1.5	0.60	2.06	0	0	0	n/a	n/a

*Designated critical habitat lacking primary constituent element required for the species have been deleted from the totals (e.g., cropland, field, pasture, developed, etc.)and are not mitigated for.

Critical Habitat

Impacts resulting from either alignment alternative would occur to federally designated critical habitat for the southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, arroyo toad, and San Diego ambrosia. A summary of impacts to critical habitat per species and per alternative is provided in Table 3.24-4.

Existing Alignment Alternative (Preferred Alternative)

The Existing Alignment Alternative (Preferred Alternative) would permanently impact approximately 37.13 acres and temporarily impact approximately 10.93 acres, and indirectly impact 56.36 acres of southwestern willow flycatcher habitat. Least Bell's vireo critical habitat covers the entire length of the Existing Alignment Alternative (Preferred Alternative). Approximately 63.15 acres would be permanently impacted, 32.6 acres would be temporarily impacted, and 73.72 acres would be indirectly impacted. The Existing Alignment Alternative (Preferred Alternative) would permanently impact 41.79 acres, temporarily impact 30.19 acres, and indirectly impact 31.92 acres of California gnatcatcher critical habitat. The Existing Alignment Alternative (Preferred Alternative) would permanently impact approximately 77.98 acres, temporarily impact approximately 64.27 acres, and indirectly impact 102.07 acres of arroyo toad critical habitat. The Existing Alignment Alternative (Preferred Alternative) would permanently impact 1.5 acres and temporarily impact approximately 0.60 acre and indirectly impact 2.06 acres of San Diego ambrosia critical habitat. Impacts to critical habitats would occur both north and south of the existing SR-76 from South Mission eastward to the I-15 interchange.

The State Route 76 South Mission to Interstate 15 Highway Improvement Project Biological Assessment (August 2011) concluded the Existing Alignment Alternative (Preferred Alternative) may affect, and is likely to adversely affect arroyo toad, least Bell's vireo, southwestern willow flycatcher, and coastal California gnatcatcher. The Project Biological Assessment (August 2011) concluded the project may affect, but is not likely to adversely affect, the Distinct Population Segment of the southern California steelhead. Per the USFWS Biological Opinion for this project (Appendix K), the proposed action is not likely to jeopardize the continued existence of these species and is not likely to result in the destruction or adverse modification of designated critical habitat for these species with implementation of the proposed avoidance, minimization, and/or mitigation measures.

Southern Alignment Alternative

The Southern Alignment Alternative would result in permanent impacts to southwestern willow flycatcher, least Bell's vireo, and coastal California gnatcatcher critical habitat, and arroyo toad. The Southern Alignment Alternative would permanently impact 16.36 acres, temporarily impact 5.96 acres, and indirectly impact 56.80 acres of southwestern willow flycatcher critical habitat. Permanent impacts would occur to 33.87 acres of least Bell's vireo critical habitat, 40.88 acres would be temporarily impacted, and 218.89 acres would be indirectly impacted. Also, 52.94 acres of coastal California gnatcatcher critical habitat would be permanently impacted, 36.19 acres would be temporarily impacted, and 70.97 acres would be indirectly impacted. The alignment would permanently impact 90.39 acres, temporarily impact 64.14 acres, and indirectly impact 235.2 acres of arroyo toad critical habitat. No impacts to San Diego ambrosia critical habitat are anticipated as a result of the Southern Alignment Alternative. The Southern Alignment Alternative "may affect, and is likely to adversely affect" the arroyo toad, least Bell's vireo, southwestern willow flycatcher, and coastal California gnatcatcher. It is anticipated that the Southern Alignment Alternative would have "no effect" on San Diego ambrosia and southern California steelhead.

San Diego County's possible upgrade to the existing SR-76 could result in permanent impacts to 34.9 acres and temporary impacts to 11.14 acres of arroyo toad critical habitat. Construction of the County's upgrade to the existing SR-76 would result in direct permanent impacts to 9.0 acres and direct temporary impacts to 4.06 acres of federally designated critical habitat for the southwestern willow flycatcher. Direct permanent impacts could occur to 23.71 acres of critical habitat and direct temporary impacts could occur to 6.13 acres of least Bell's vireo critical habitat. The upgrade could also result in permanent impacts to 12.55 acres and temporary impacts to 4.25 acres of designated critical habitat for the gnatcatcher. Impacts to critical habitat for the San Diego ambrosia are not available.

3.24.4 Avoidance, Minimization, and/or Mitigation Measures

Mitigation for the San Diego ambrosia, arroyo toad, coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher would be met through the proposed mitigation measures for Diegan coastal sage scrub, riparian, and wetland vegetation. Tables 3.21-3 and 3.21-4 identify the range of mitigation ratios proposed. Additional mitigation measures may be required under the FESA or CESA. A complete list of all avoidance, minimization, and/or mitigation measures that would be implemented for impacts to San Diego ambrosia, arroyo toad, coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher is included in the USFWS Biological Opinion for this project (Appendix K). Measures proposed in the Biological Opinion (Appendix K) for the SR-76 South Mission to I-15 Highway Improvement Project include, but are not limited to, the following measures discussed below.

All vegetation within the construction limits would be cleared outside the bird and arroyo toad breeding season (e.g., coastal California gnatcatcher, February 15 through August 31; least Bell's vireo, March 15 through September 15; southwestern willow flycatcher May 1 through September 15; arroyo toad, March 15 through July 31) to avoid impacts to the species. If activities must occur during this timeframe, a mandatory preconstruction survey by a qualified biologist would be conducted to ensure that no toads or nesting birds are present within the proposed work area. Should toads or a nest site be located, appropriate measures may include designation of the location as an environmentally sensitive area (ESA) and delaying/restricting project activities until nesting/fledging is completed. Construction activities within occupied/suitable arroyo toad breeding habitat may be conducted during the arroyo toad

breeding season provided the area does not contain and/or is not adjacent to gnatcatcher, vireo, and/or flycatcher habitat. If activities must occur during the arroyo toad breeding season (March 15–July 31), a qualified biologist would conduct preconstruction surveys and translocate the necessary arroyo toads to ensure that no arroyo toad eggs, tadpoles, or neonates are present within the proposed work area.

Prior to the start of active construction activities near identified arroyo toad populations and within potential arroyo toad upland habitat, qualified biologists would install fencing along the perimeter of all work areas to exclude arroyo toads from the work site. The fencing would consist of woven nylon netting approximately 2 feet in height and attached to wooden stakes. In areas where soils are suitable for aestivation, the lower 0.3 meter (1 foot) of material would stretch outward along the ground and be secured with a continuous line of sandbags to prevent burrowing beneath the fence. All fencing materials (mesh, stakes, etc.) would be removed following construction activities. Ingress and egress of construction equipment and personnel would be kept to a minimum, but, when necessary, equipment and personnel would use a single access point to the site. The access point would be as narrow as possible and would be closed off by exclusionary fencing when personnel were not present on the site. A survey would be conducted for a minimum of 6 consecutive nights within the fenced area by a USFWS-approved biologist. Surveys would continue until there have been 2 consecutive nights without arroyo toads inside the fence. Surveys would be conducted during the appropriate climactic conditions and time of day or night to maximize the likelihood of encountering arroyo toads. If the toads are found, they would be captured and translocated by the biologist to the closest area of suitable habitat along the San Luis Rey River.

A USFWS-approved biologist would oversee compliance with protective measures for the biological resources in the project area during clearing and construction activities. The biologist would specifically monitor activities that may affect listed species, such as vegetation removal and the installation of BMPs and ESA fencing to ensure that all avoidance and minimization measures are properly constructed and followed.

ESA fencing should be installed around the known population of San Diego ambrosia immediately north of the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative to avoid inadvertent impacts to the species. Prior to construction, all ambrosia within the direct impact area would be salvaged and translocated to the Morrison mitigation property, which is near the salvage location. An ambrosia translocation plan would be prepared and provided to USFWS for review and approval. The translocation would be implemented by a biologist with a history of translocating sensitive plant species. The locations where the ambrosia ramets would be transplanted have been approved by USFWS. The translocated ambrosia population would be monitored for a minimum of 5 years to document success or failure of the translocation efforts.

Pile driving associated with construction of the San Luis Rey River Bridge (Southern Alignment Alternative) should only be conducted between September 16 and February 14 to reduce the effects of noise on nesting and breeding birds within the project vicinity.

During any nighttime construction, all project lighting should be directed at the roadway or the construction site and away from sensitive habitats. Light glare shields may also be used to reduce the extent of illumination onto adjoining areas.

Mitigation requirements for critical habitat impacts within the Existing Alignment Alternative (Preferred Alternative) are detailed in the USFWS Biological Opinion for this project (Appendix

K) and in Table 3.24-5. Mitigation requirements for critical habitat impacts within Southern Alignment Alternative have not been determined, but if the Southern Alignment Alternative is implemented then the critical habitat mitigation would be negotiated with the resource agencies.

Table 3.24-5. Proposed Mitigation for Critical Habitat within Existing Alignment Alternative (acres)

Critical Habitat	Location			Total
	Groves	Tabata	Vessels	
Arroyo Toad	35.57	22.70	162.00	220.27
Southwestern Willow Flycatcher	0	14.60	87.50	102.10
Least Bell's Vireo	0	22.70	162	184.70
Coastal California Gnatcatcher	71.09	19.70	0	90.79
San Diego Ambrosia	20.89	0	0	20.89

State Route 76 Corridor Net Ecological Benefit

Pursuant to the SANDAG 2004 TransNet Sales Tax Extension Ordinance, SR-76 highway projects are to implement the "net benefit" mitigation standard. SR-76 was one of three highway expansions where the TransNet Ordinance indicated that "[d]irect and indirect impacts to sensitive plant and animal populations, and to the function of the wildlife corridors, should be mitigated in order to produce an on-site 'net benefit' to species and to the movement of wildlife…." Furthermore, the TransNet Ordinance states that the net benefit, "will require a comprehensive baseline analysis of existing and future conditions, adoption of measures to mitigate direct and indirect impacts to species, adoption of measures to accommodate species-specific wildlife movement through the corridors, and implementation of capital project designs that can reduce impacts." The proposed project would include elements such as wildlife crossings, directional wildlife fencing, habitat restoration, and land acquisitions to support wildlife habitat connectivity.

The objective to implement this goal includes (1) land acquisition for biological mitigation and increased long-term connectivity, (2) floodplain/riparian restoration, (3) enhanced/new wildlife crossings, (4) water-quality improvement activities, and (5) species-specific enhancement (e.g., arroyo toad and San Diego ambrosia).

SANDAG established an advisory committee to recommend what would constitute a net benefit for SR-76. The group agreed that the overall goal for the San Luis Rey watershed was to maintain and restore a self-sustaining natural ecosystem. Many biotic and abiotic objectives were discussed to implement this goal, including (1) land acquisition for biological mitigation and increased long-term connectivity, (2) floodplain/riparian restoration, (3) enhanced/new wildlife crossings, (4) water-quality improvement activities, and (5) species-specific enhancement (e.g., arroyo toad and San Diego ambrosia). The net benefit mitigation would be mitigation above and beyond that required by CEQA, NEPA, or other resource agency permit requirements. The advisory committee suggested that a larger strategy/vision plan for the San Luis Rey watershed was needed to put the goal and objectives into context.

As discussed with advisory committee members, existing wildlife undercrossing structures would be maintained/enhanced as part of SR-76 highway projects. Wildlife would be directed to areas identified by the Draft NCMSCP as PAMAs, and to the San Luis Rey River Park. BMPs for storm water runoff would also be provided as a requirement of Caltrans' statewide NPDES construction permit.

The net benefit should focus on the necessary first steps to achieve the stated goal. While all the objectives are important, they are all based on maintaining and maximizing the open space in the San Luis Rey River corridor. If land is acquired for increased long-term connectivity, future objectives such as habitat restoration and enhancement, species reintroduction and population enhancements, and urban runoff management (not related to SR-76) can be addressed as part of a large watershed plan. The development of a watershed plan is larger than the responsibilities of Caltrans under SR-76 projects, but the net benefit would contribute to implementing important aspects of the plan (i.e., land acquisition).

It was proposed that the SR-76 net benefit include the acquisition of property in the San Luis Rey River corridor to protect existing resources and increase future restoration opportunities. All acquisitions would be consistent with the County's San Luis Rey Park Master Plan and the Draft North County MSCP.

The SR-76 South Mission to I-15 project would contribute to the net benefit by installing wildlife undercrossings to improve regional and local wildlife corridors. The project would also include fencing to funnel wildlife toward the crossings and to prevent wildlife traffic mortalities. The acquisition of large land parcels is planned in key locations within the watershed to preserve wildlife corridor connectivity and to help preserve the rural setting. Caltrans is in the process of purchasing property to conserve regional connectivity between sensitive habitats and to help preserve the rural setting. Directional wildlife crossings are also part of the net environmental benefit.

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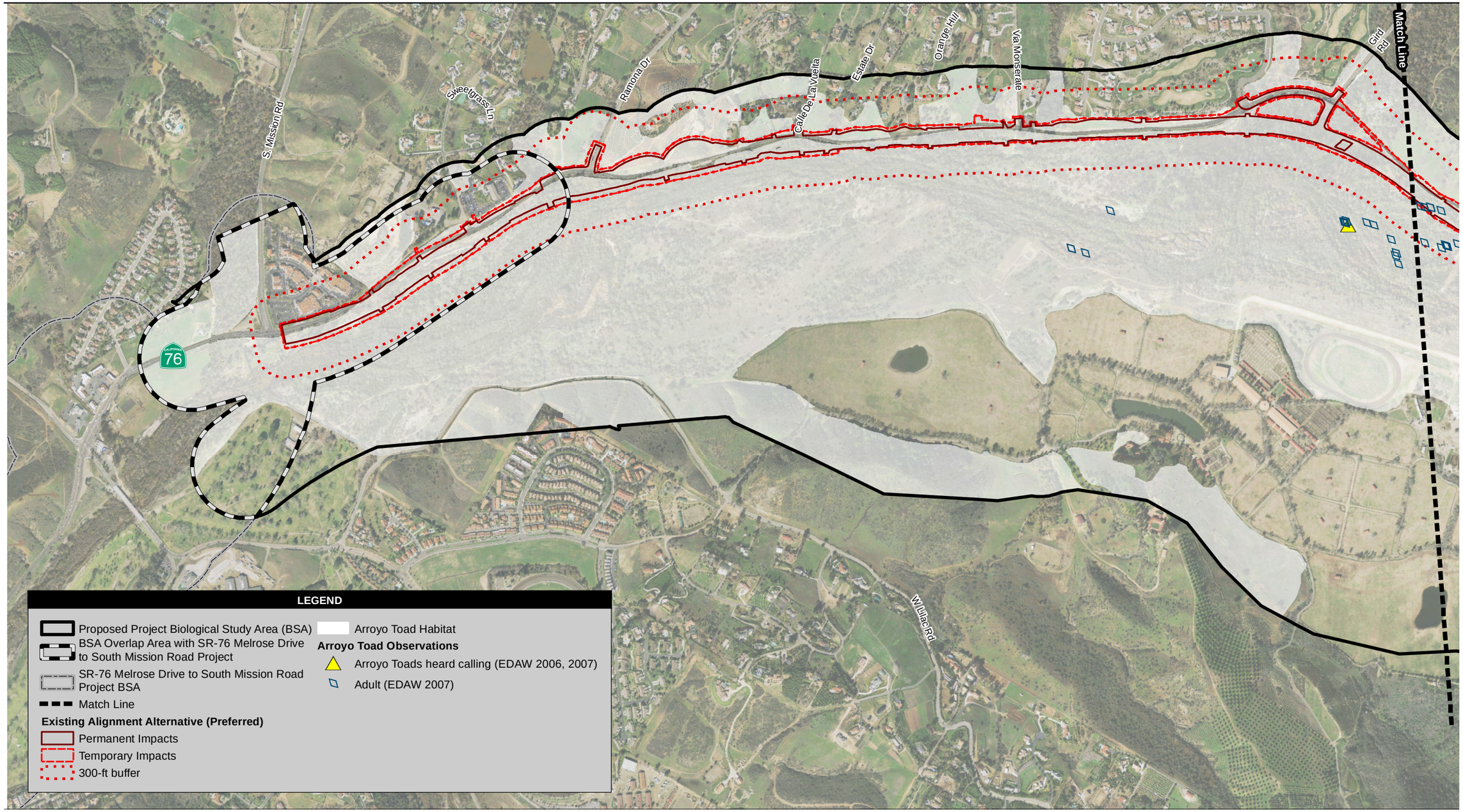

Source: DigitalGlobe 2008; EDAW 2006, 2007; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.24-1a
Arroyo Toads Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)

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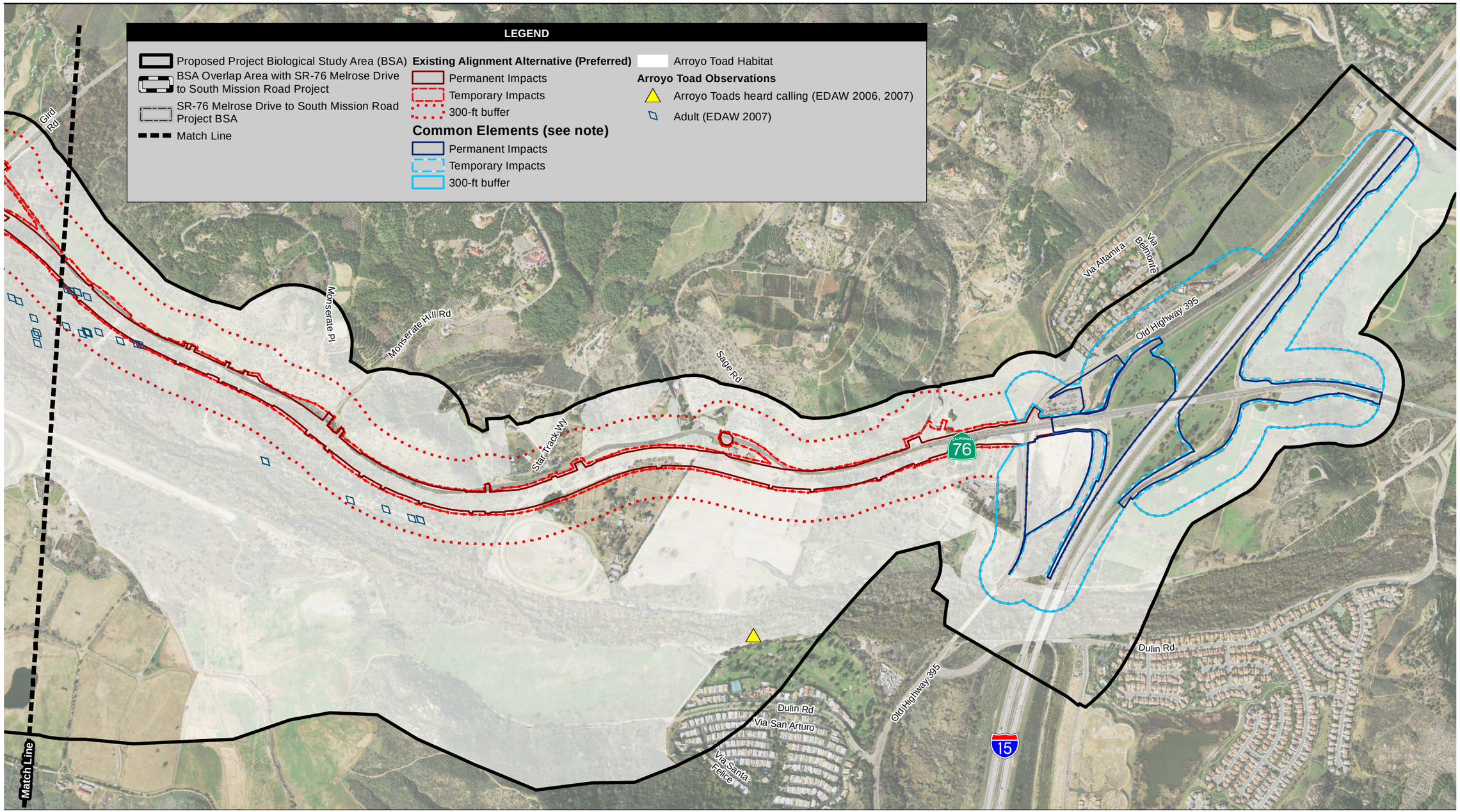

Source: DigitalGlobe 2008; EDAW 2006, 2007; Dokken Engineering 2010

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Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-1b
Arroyo Toads Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)

SR-76 South Mission Road to Interstate 15 – Highway Improvement Project

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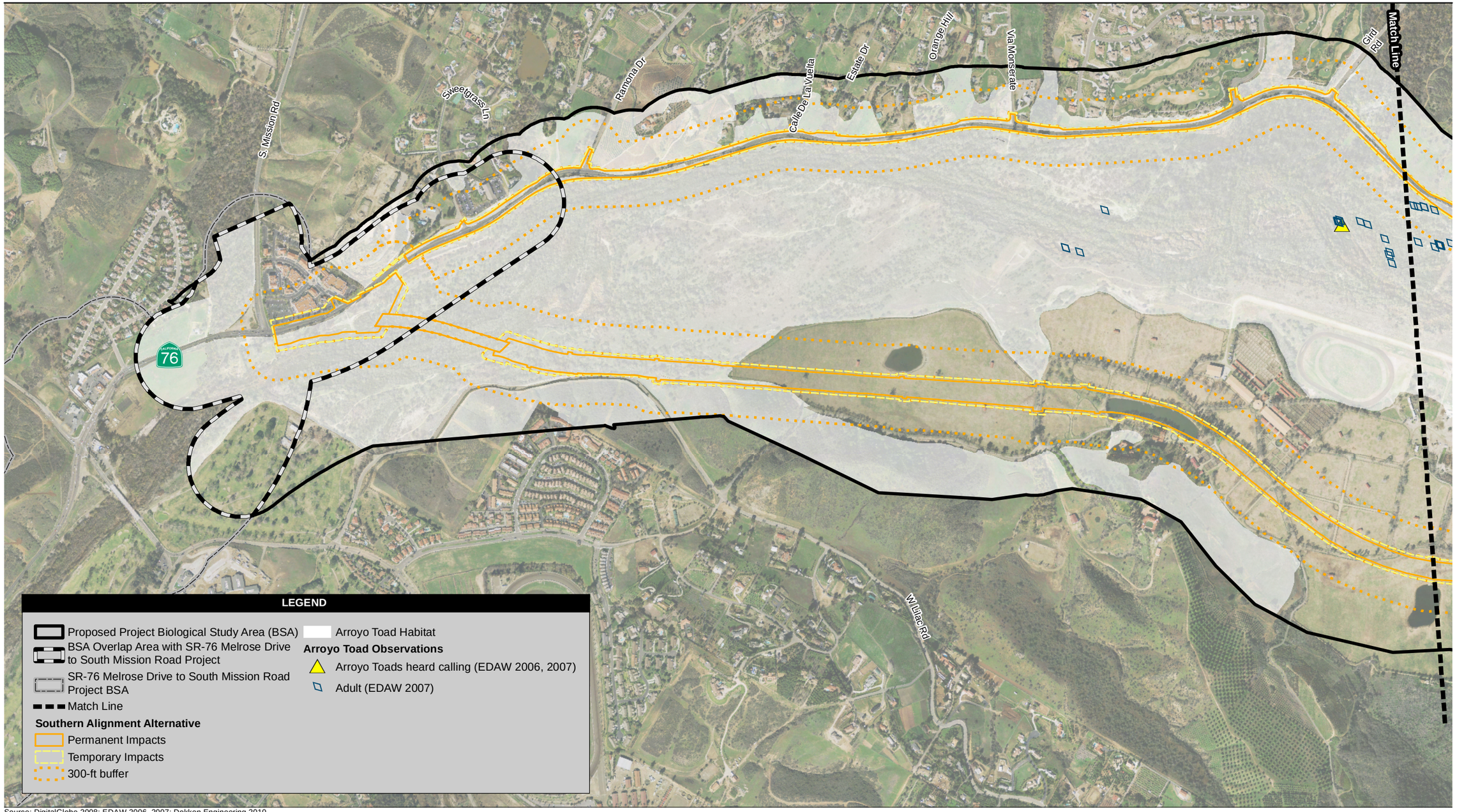

Source: DigitalGlobe 2008; EDAW 2006, 2007; Dokken Engineering 2010

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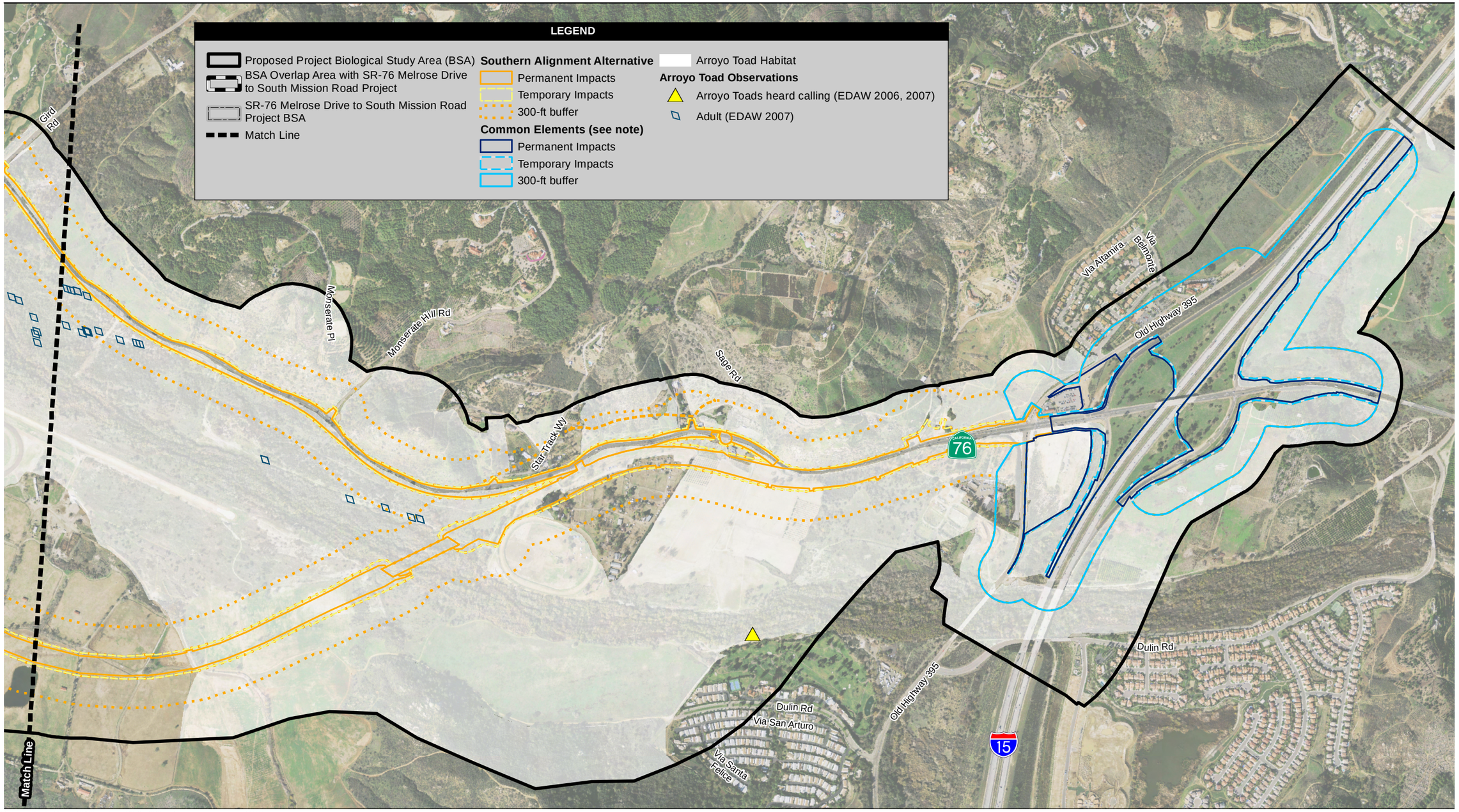
Scale: 1 = 11,999; 1 inch = 1,000 feet

Figure 3.24-2a
Arroyo Toads Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\SGIS\MXD\EIR_EIS\October 2011\fig 3_24_2a_ARTO_Southern_WEST.mxd, 10/9/2011, augellop



Source: DigitalGlobe 2008; EDAW 2006, 2007; Dokken Engineering 2010

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Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-2b
Arroyo Toads Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative

SR-76 South Mission Road to Interstate 15 – Highway Improvement Project

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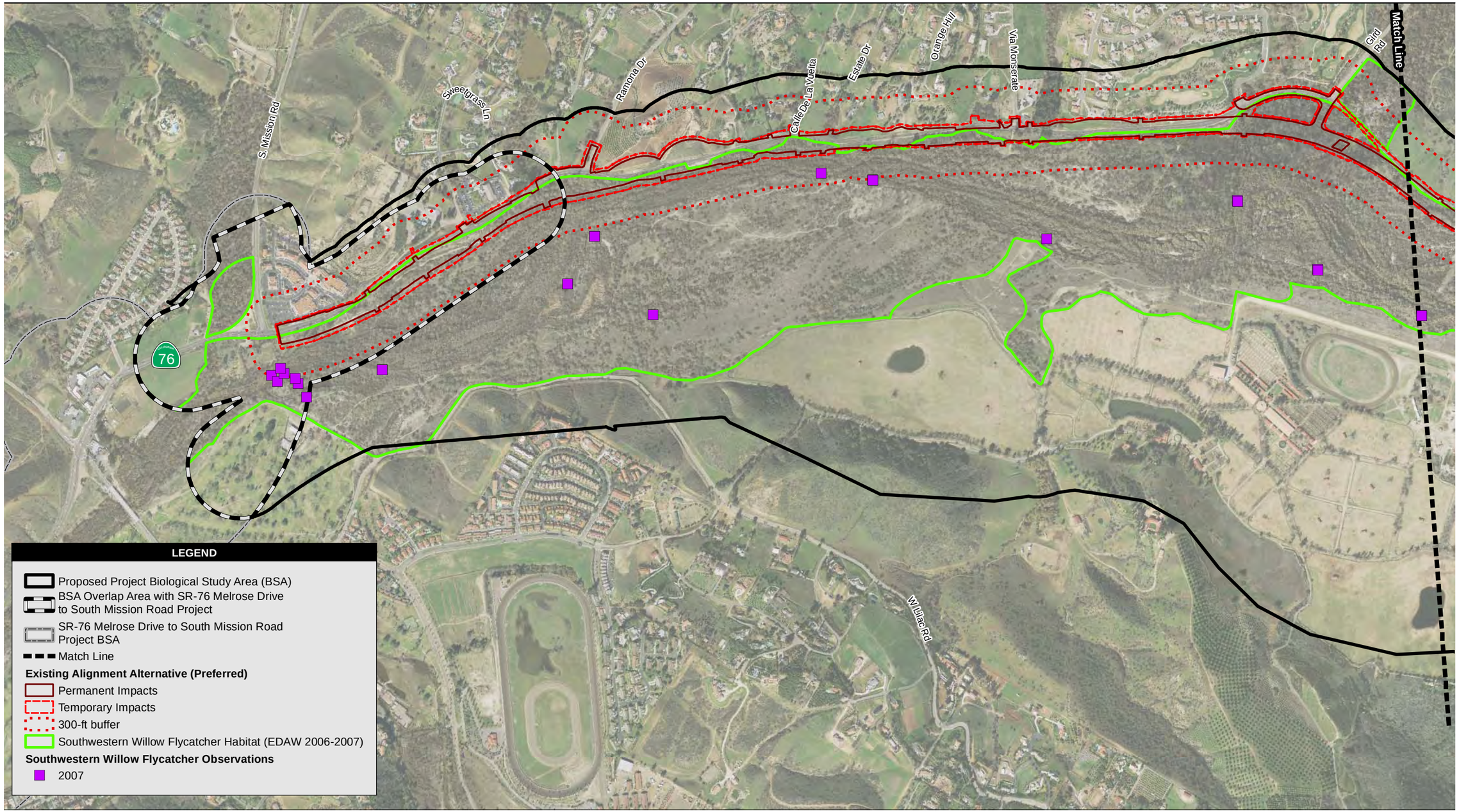

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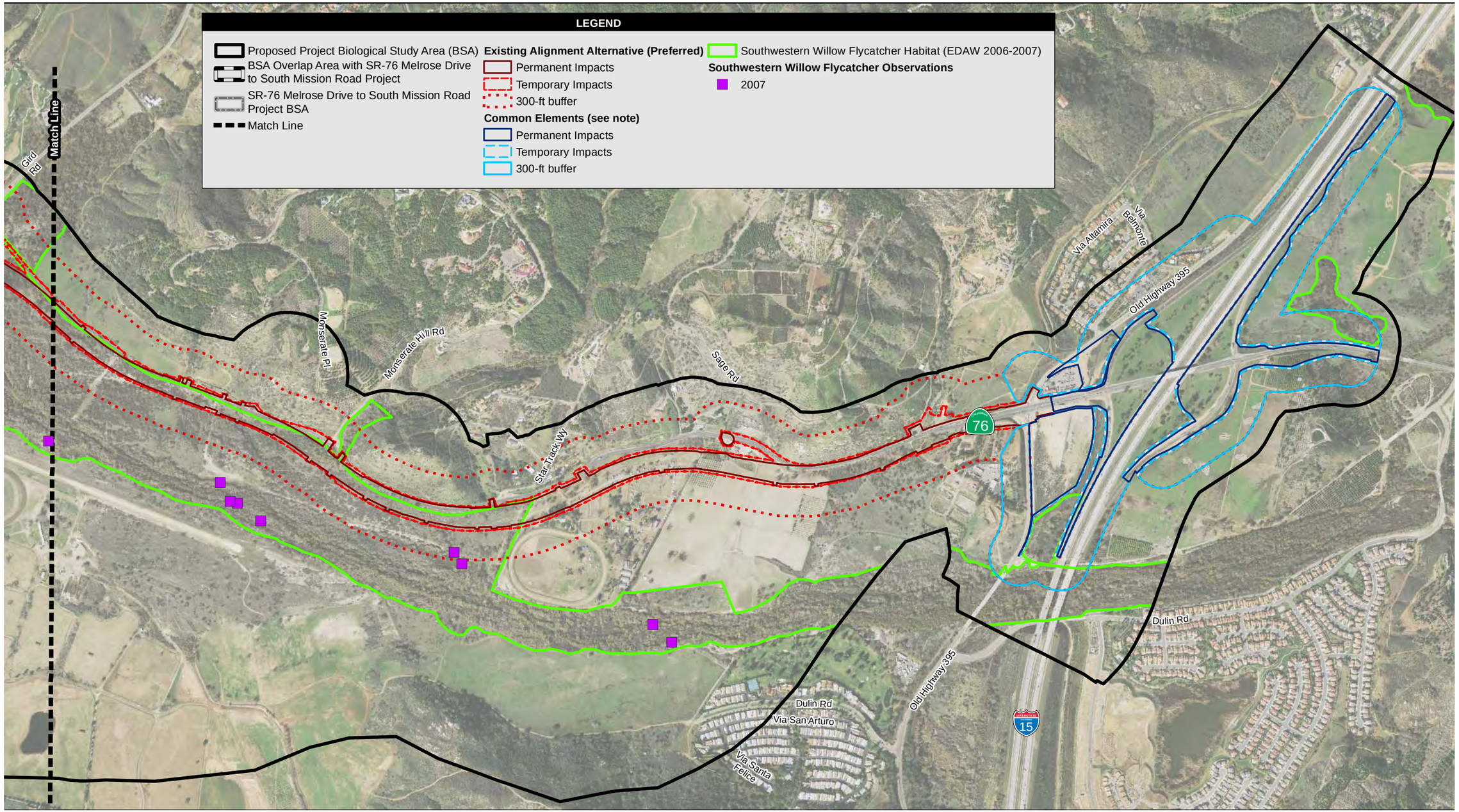
Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.24-3a
Southwestern Willow Flycatchers Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)



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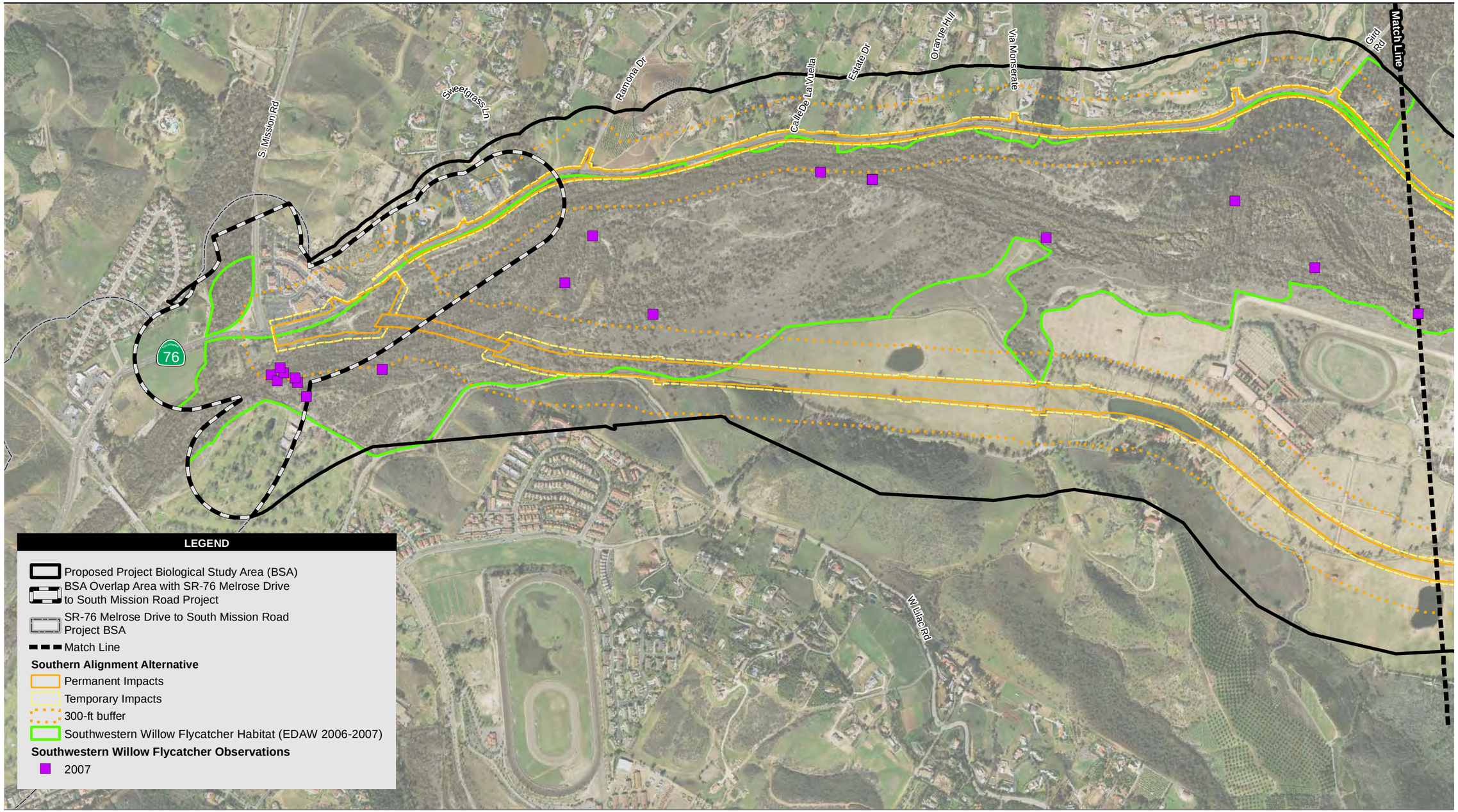
Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-3b
Southwestern Willow Flycatchers Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)



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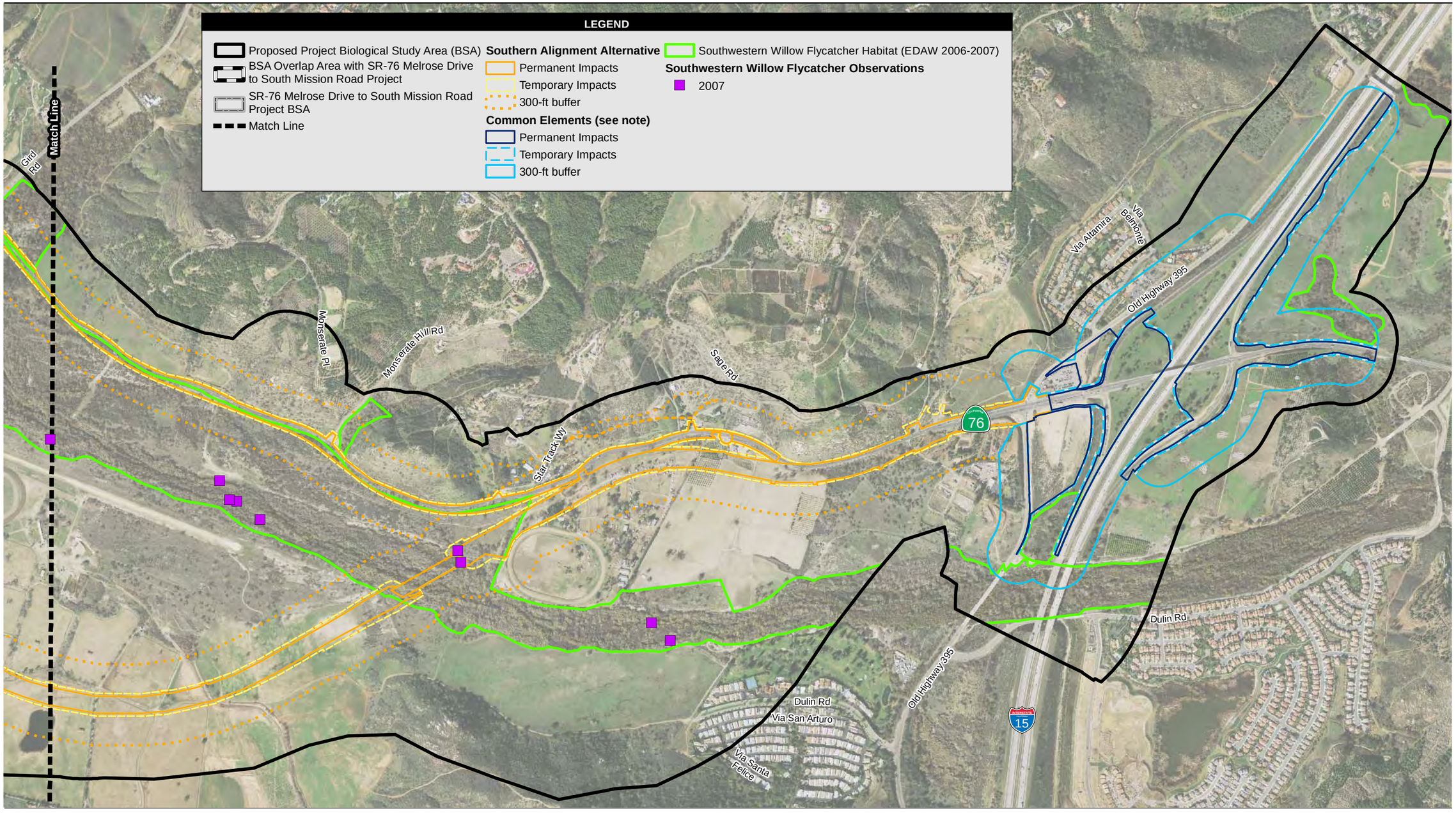
Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.24-4a
Southwestern Willow Flycatchers Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative

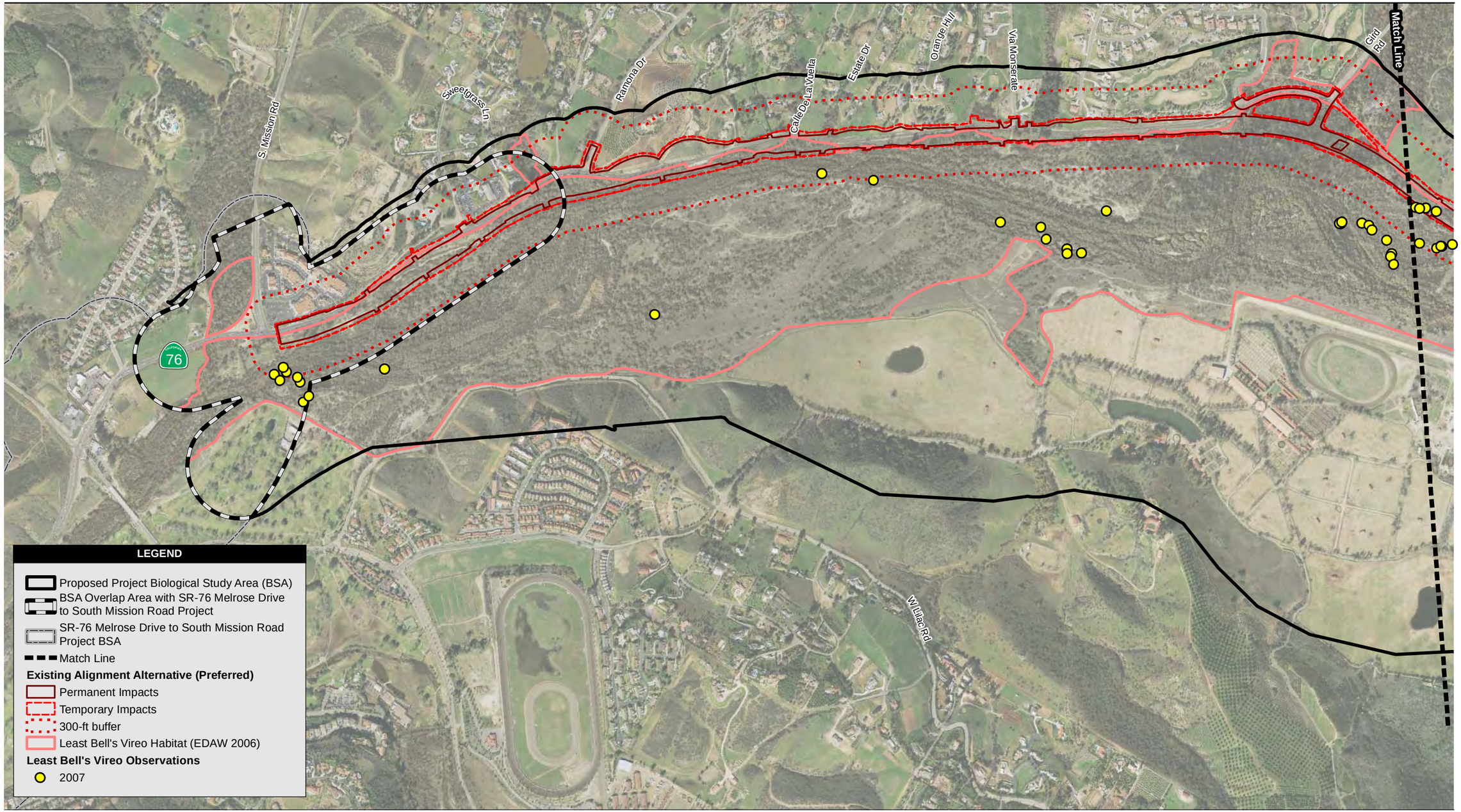


1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-4b
Southwestern Willow Flycatchers Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative



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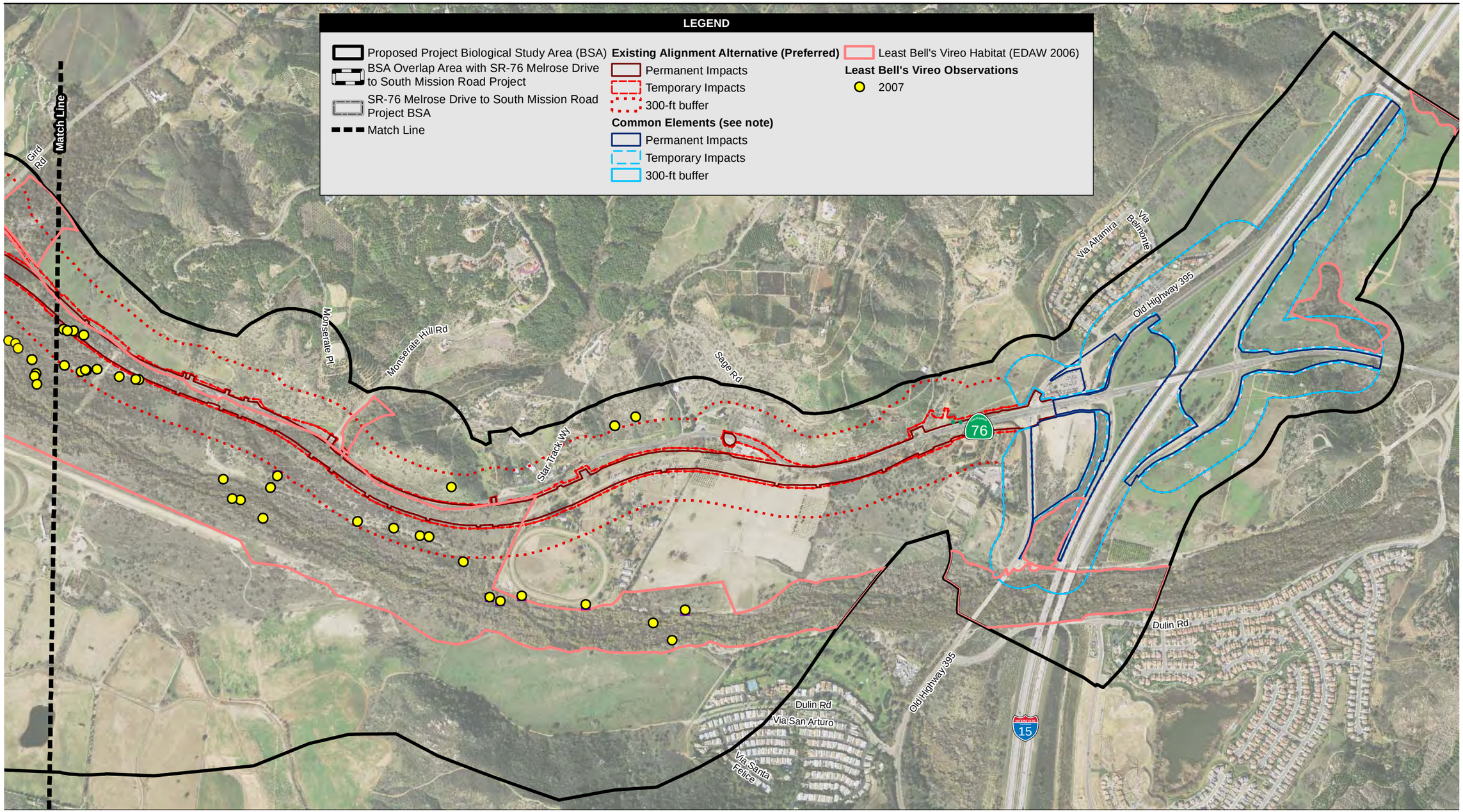
Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.24-5a
Least Bell's Vireos Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)

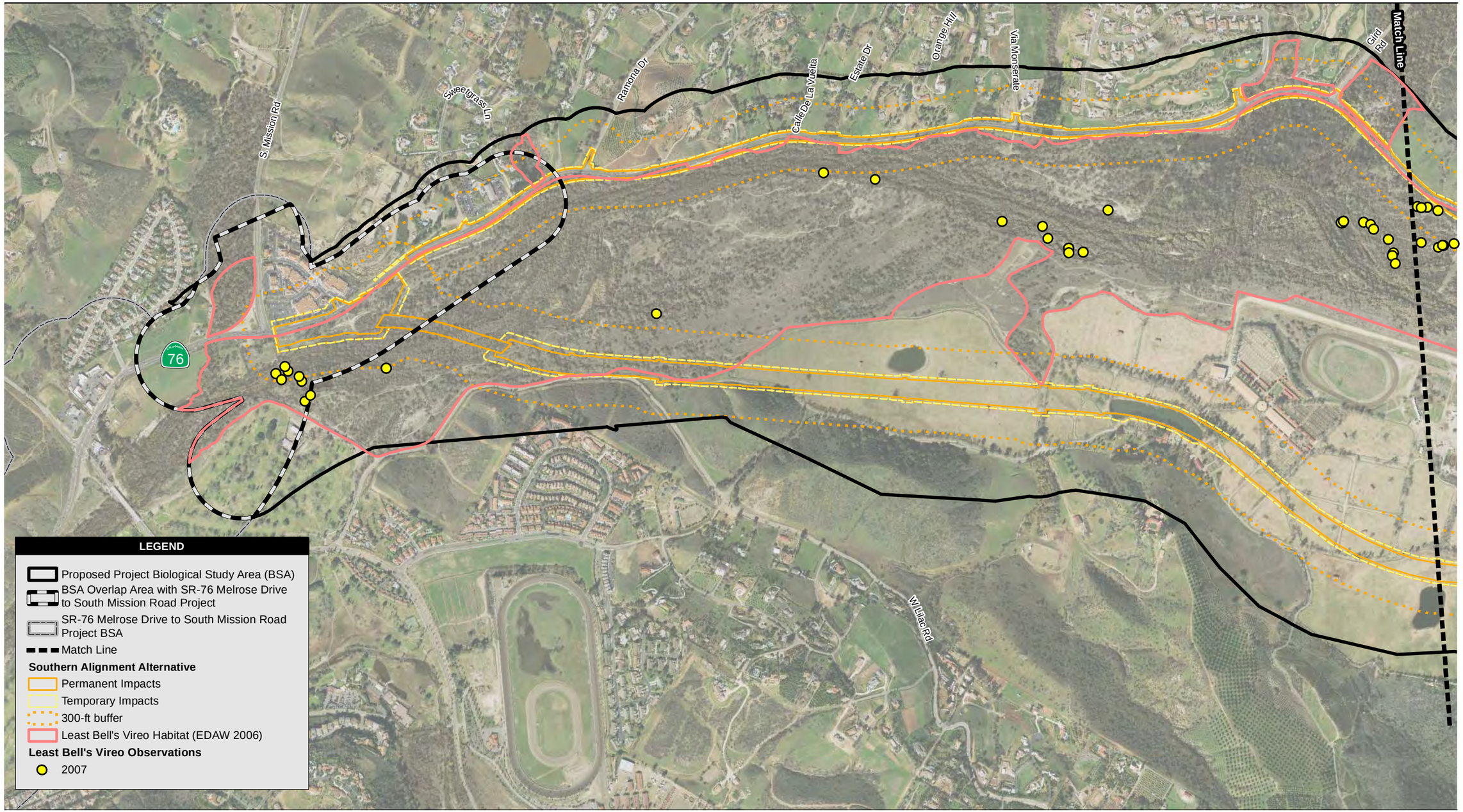


1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

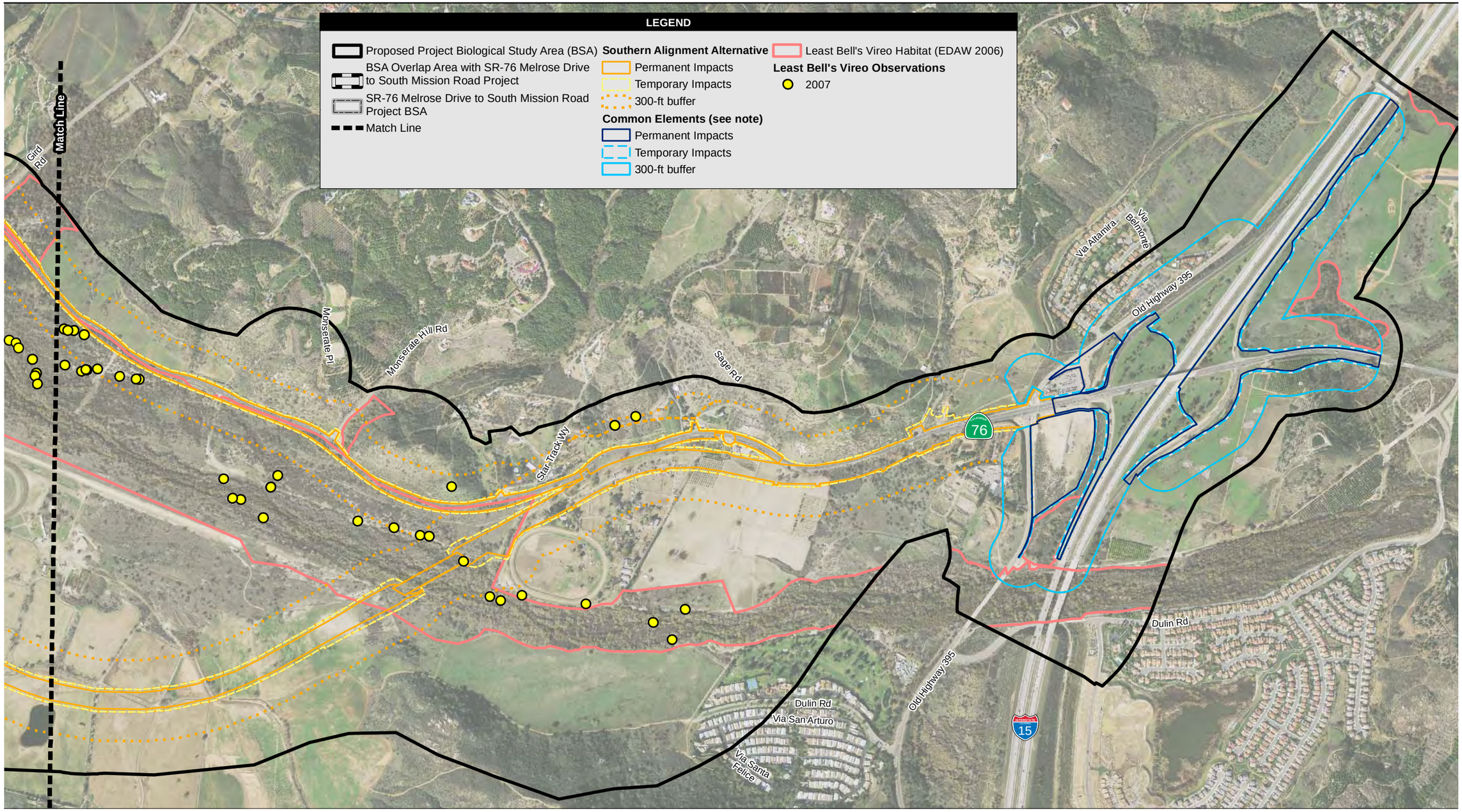
Figure 3.24-5b
Least Bell's Vireos Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)

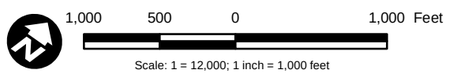


1,000 500 0 1,000 Feet

Scale: 1 = 12,0000; 1 inch = 1,000 feet

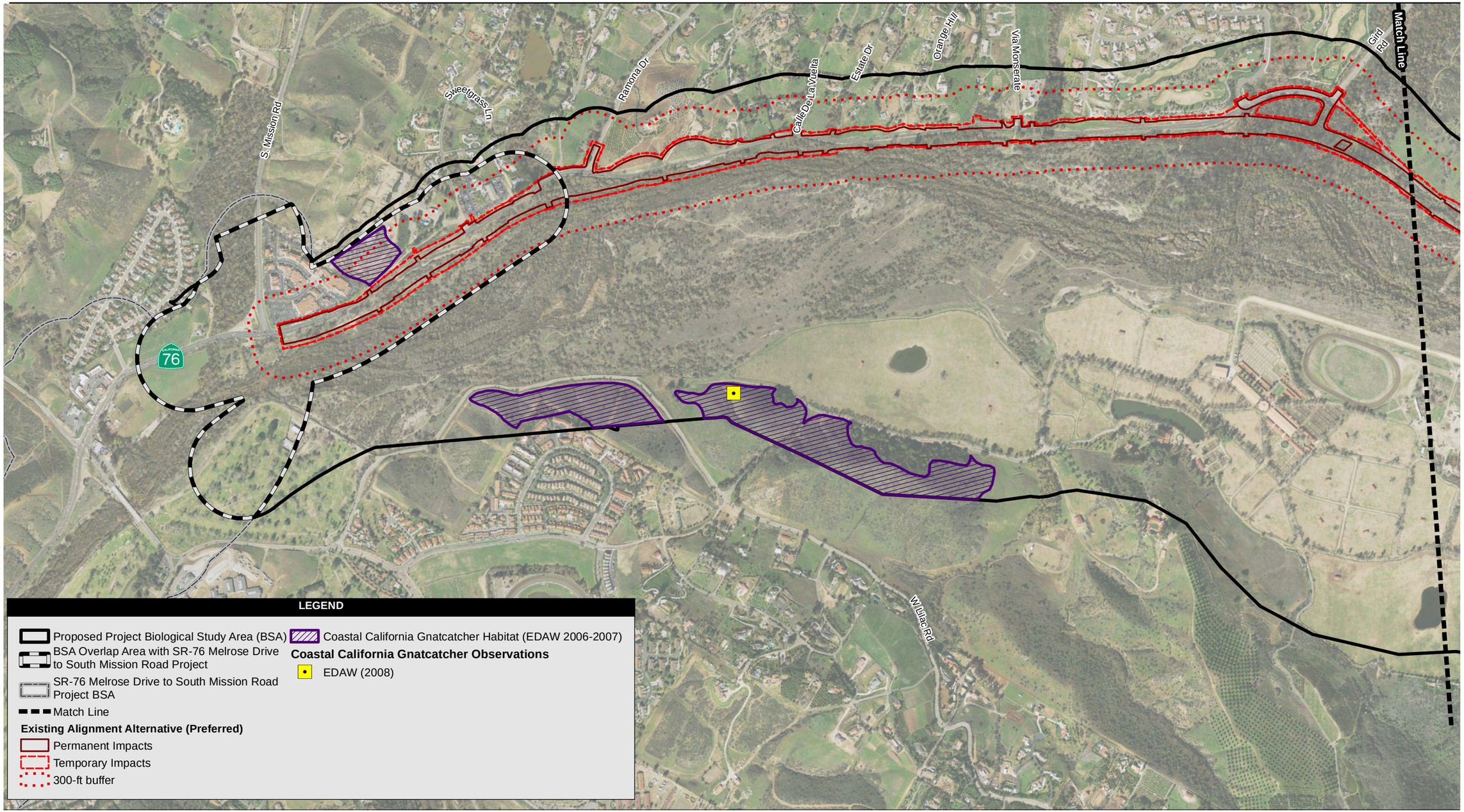
Figure 3.24-6a
Least Bell's Vireos Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative





Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-6b
Least Bell's Vireos Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative



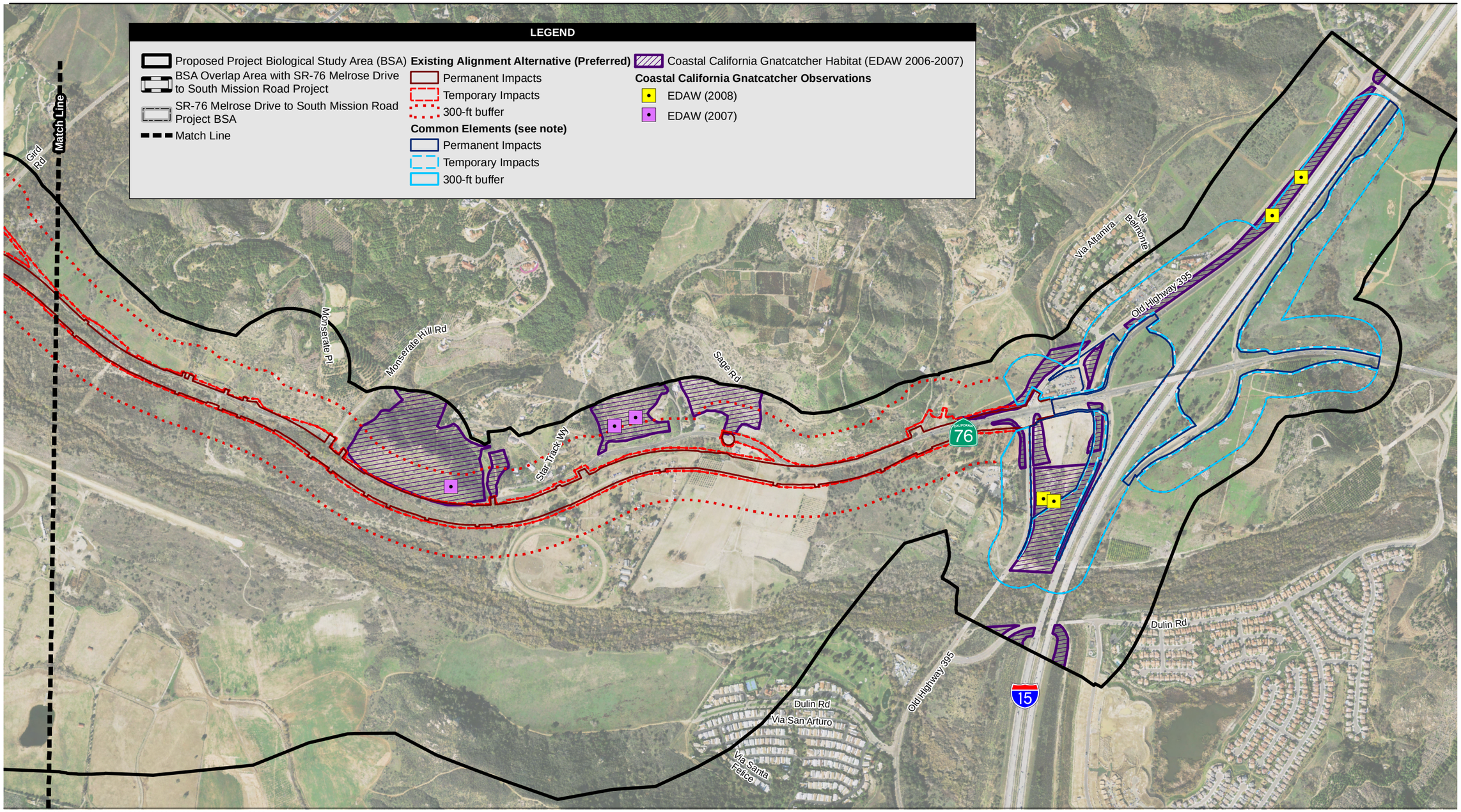
Source: DigitalGlobe 2008; EDAW 2007, 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.24-7a
Coastal California Gnatcatchers Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_24_7a_CAGN_Existing_WEST.mxd, 10/10/2011, augellop



Source: DigitalGlobe 2008; EDAW 2007, 2008; Dokken Engineering 2010

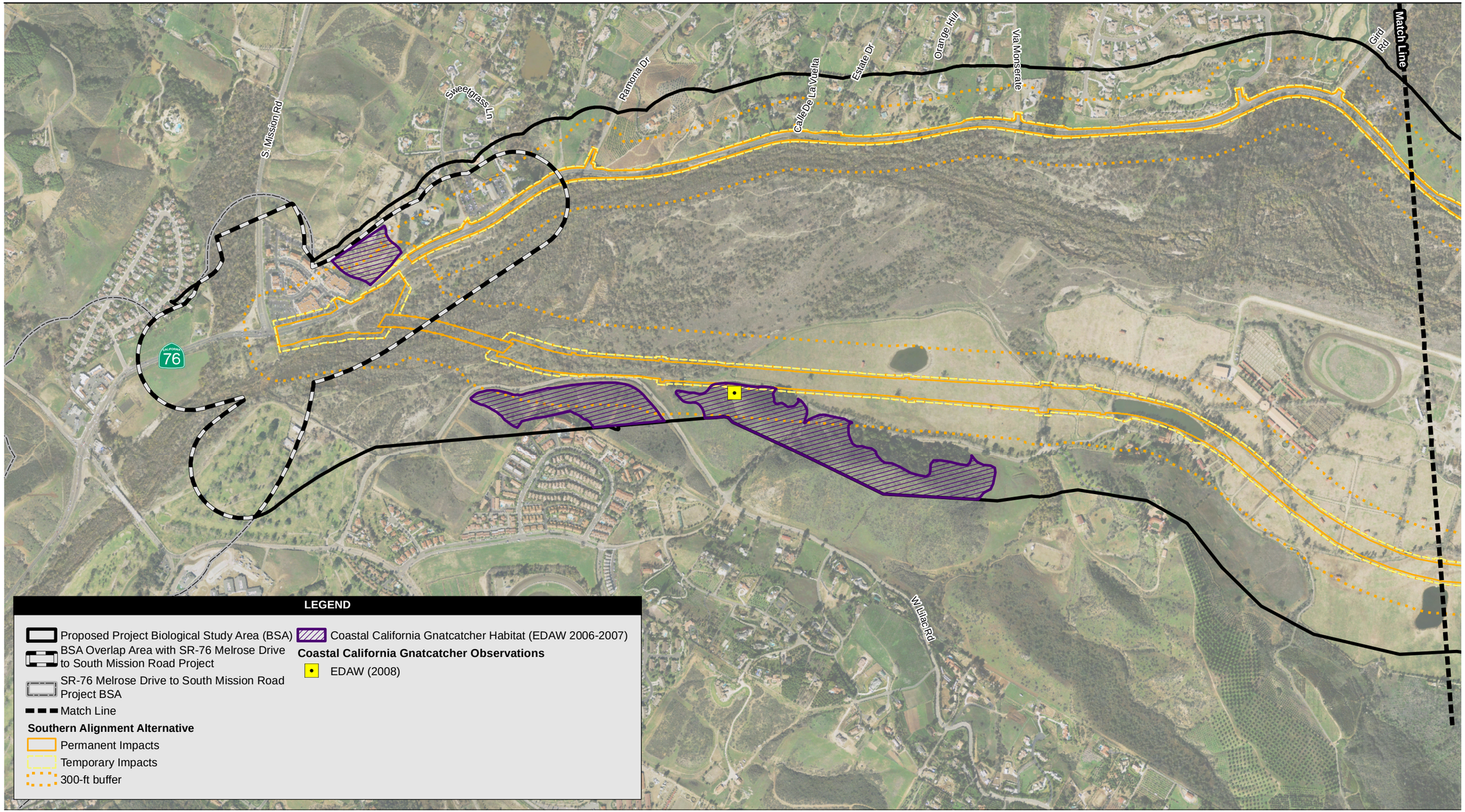
1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-7b
Coastal California Gnatcatchers Detected during Surveys and Recorded from Regional Data - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_24_7b_CAGN_Existing_EAST.mxd, 10/10/2011, augellop



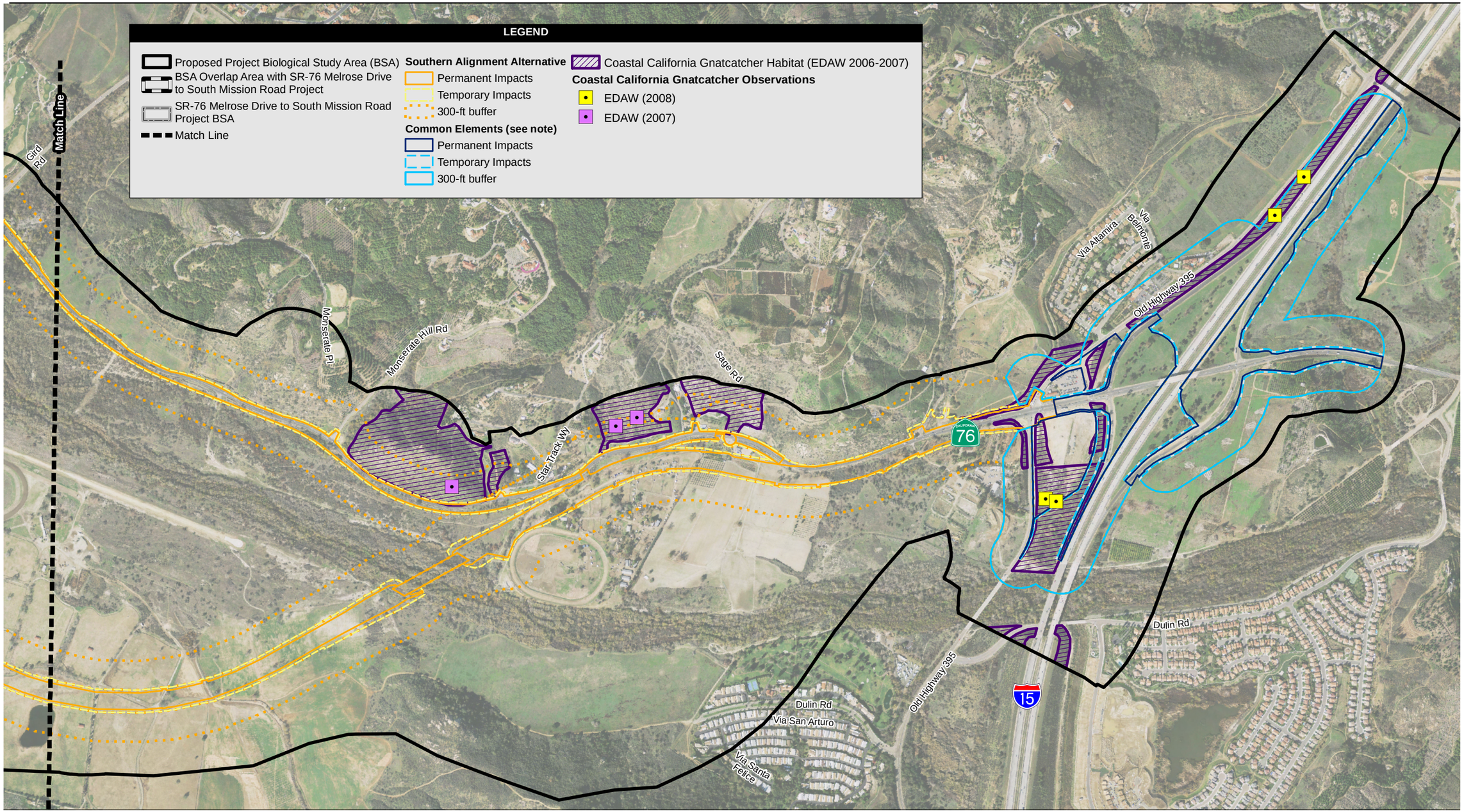
Source: DigitalGlobe 2008; EDAW 2007, 2008; Dokken Engineering 2010

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Figure 3.24-8a
Coastal California Gnatcatchers Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_24_8a_CAGN_Southern_WEST.mxd, 10/10/2011, augellop



Source: DigitalGlobe 2008; EDAW 2007, 2008; Dokken Engineering 2010

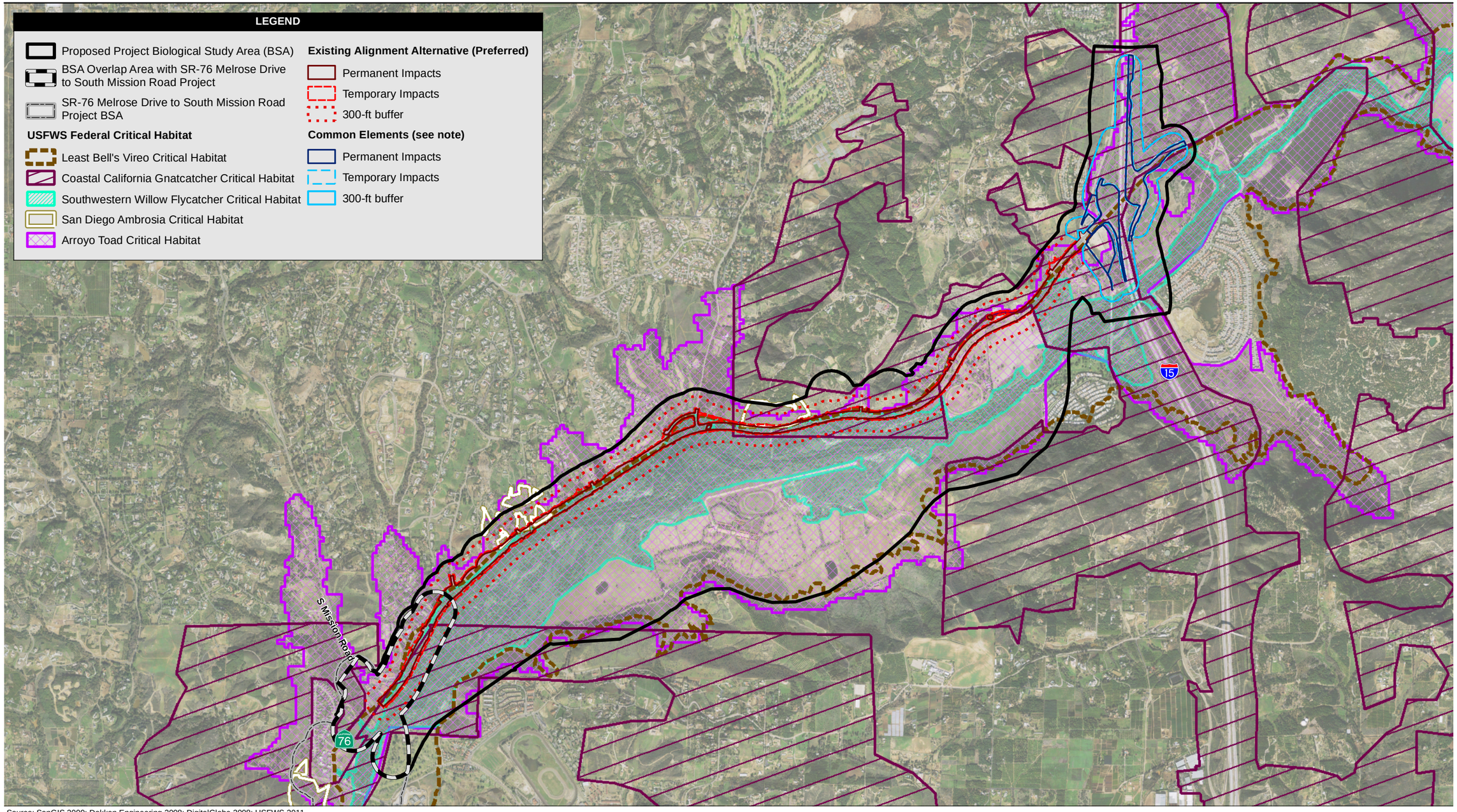
1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-8b
Coastal California Gnatcatchers Detected during Surveys and Recorded from Regional Data - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_24_8b_CAGN_Southern_EAST.mxd, 10/10/2011, augellop



Source: SanGIS 2009; Dokken Engineering 2008; DigitalGlobe 2008; USFWS 2011

2,500 1,250 0 2,500 Feet

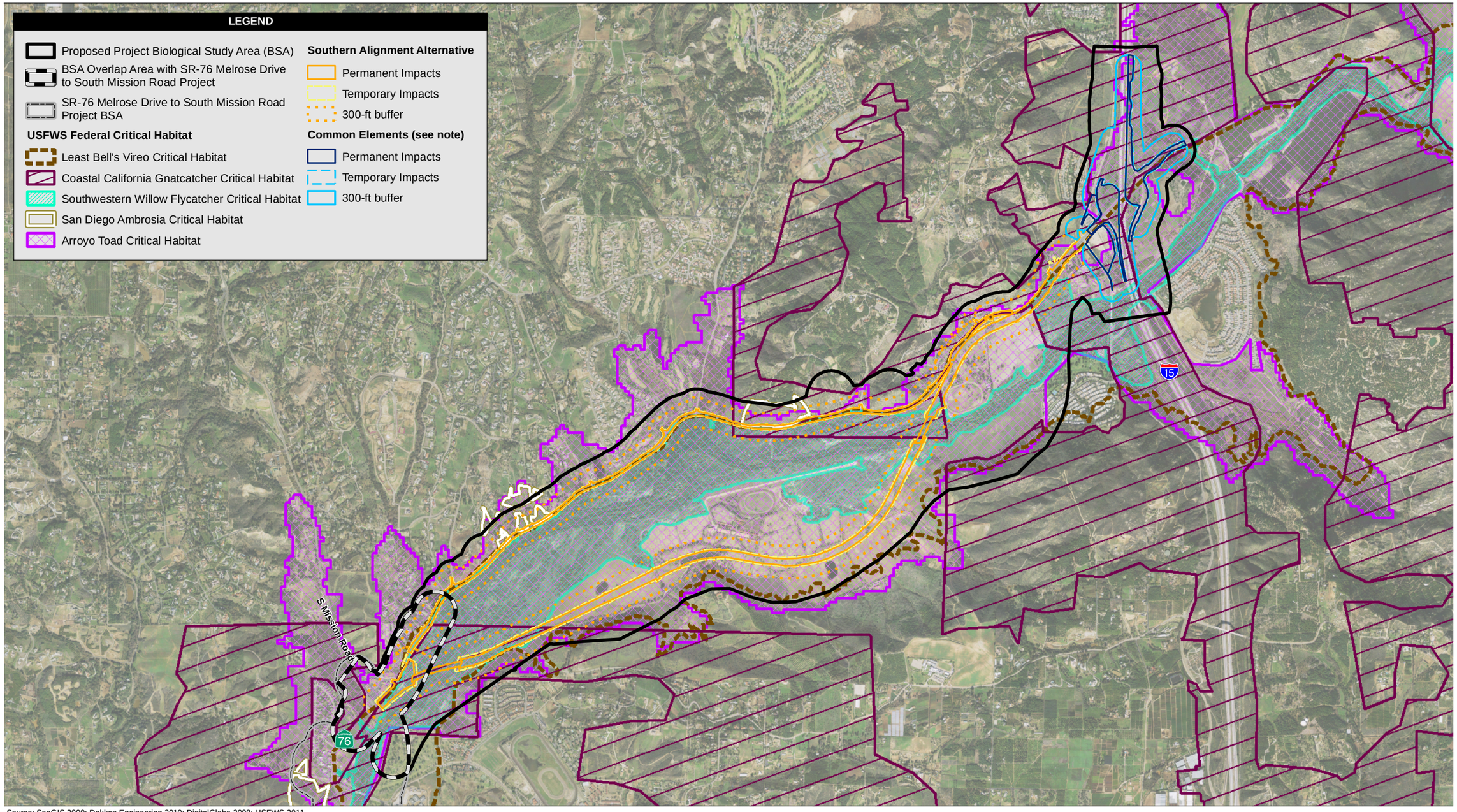
Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-9

Critical Habitat in Project Vicinity - Existing Alignment Alternative (Preferred)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_24_9_NES_FCH_Existing.mxd, 10/11/2011, augellop



Source: SanGIS 2009; Dokken Engineering 2010; DigitalGlobe 2008; USFWS 2011

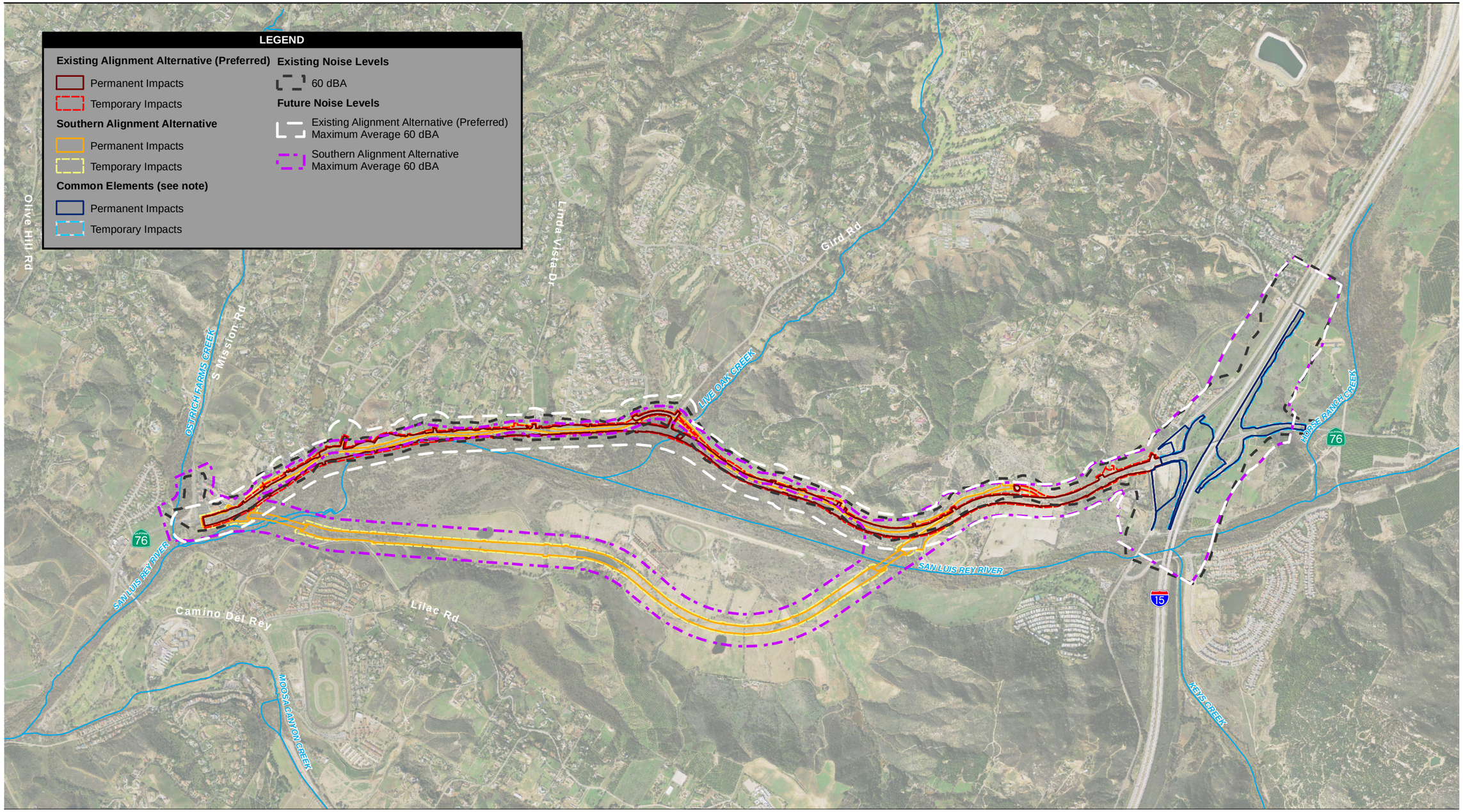
2,500 1,250 0 2,500 Feet

Scale: 1 = 30,000; 1 inch = 2,500 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-10
Critical Habitat in Project Vicinity - Southern Alignment Alternative

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_24_10_NES_FCH_Southern.mxd, 10/11/2011, augellop



Source: DigitalGlobe 2008; SANGIS 2009; Dokken Engineering 2010

2,500 1,250 0 2,500 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Common Elements include the modified Park and Ride facilities and SR-76/I-15 interchange. For additional detail please refer to Figures 2.1-4 (Partial Cloverleaf interchange) and 2.1-5 (Spread Diamond interchange).

Figure 3.24-11
Noise Contour

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3.25 INVASIVE SPECIES

3.25.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. 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 invasive species list, currently maintained by the California Invasive Species Council, to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

3.25.2 Affected Environment

This section is based on the 2008 State Route 76 South Mission Road to Interstate 15 Highway Improvement Project NES (August 2010), which is incorporated by reference.

A list of invasive species observed in the BSA is found in Table 3.25-1. To provide an indication of the threat posed by the species, the table includes rankings from the California Invasive Plant Inventory Database (Cal-IPC 2006). The California Invasive Plant Council (Cal-IPC) database assigns invasive plant species an overall score of Limited, Moderate, or High based on the species' ecological impacts, invasive potential, and ecological distribution. The database also includes a list of plant species that were evaluated but not listed because their overall score in the Cal-IPC rating system falls below the threshold for ranking.

Within the riparian and wetland vegetation communities of the project area, the most prominent invasive species are giant reed (*Arundo donax*) and tamarisk (*Tamarix* sp.). Giant reed and tamarisk are both notorious for displacing native vegetation. Areas dominated by these species are common along major rivers of coastal southern California such as the San Luis Rey River. In many cases, giant reed or tamarisk form monotypic stands interspersed among the riparian forest within the floodplain of the San Luis Rey River. Giant reed and tamarisk typically establish following a disturbance, replacing and excluding native riparian vegetation due to their superior competitive abilities. The Cal-IPC database gives overall scores of High to the giant reed and the tamarisk species most commonly found in the project area, *T. ramosissima.*

Other invasive species observed in riparian areas in the project area include brome grasses (*Bromus* spp.), short-pod mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*), tree tobacco (*Nicotiana glauca*), and milk thistle (*Silybum marianum*). Indian sweet clover (*Melilotus indica*) was observed in freshwater marsh areas and curly dock (*Rumex crispex*) was observed in disturbed wetlands.

Table 3.25-1. Invasive Species in the Project Area

Scientific Name	Common Name	Cal-IPC Score	Areas Impacted
Arundo donax	giant reed	High	Riparian areas
Avena barbata	slender wild oat	Moderate	Disturbed areas, coastal scrub
Brassica spp.	mustards	*B. nigra:* Moderate *B. rapa:* Limited *B. tournefortii*: High	Disturbed areas, coastal scrub, riparian areas
Bromus spp.	brome grasses	*B. diandrus*: Moderate *B. hordeaceus*: Limited *B. madritensis rubens*: High	Disturbed areas, riparian areas
Centaurea melitensis	tocalote	Moderate	Disturbed areas, grassland, oak woodland
Cynodon dactylon	Bermuda grass	Moderate	Disturbed areas, riparian areas
Erodium spp.	filaree	*E. botrys:* Evaluated but not listed *E. cicutarium*: Limited *E. moschatum:* Evaluated but not listed	Disturbed areas
Eucalyptus spp.	eucalyptus	*E. camaldulensis*: Limited *E. globulus*: Moderate	Eucalyptus woodland
Hirschfeldia incana	short-pod mustard	Moderate	Riparian scrub, grassland
Lactuca serriola	prickly lettuce	Evaluated but not listed	Riparian forest
Melilotus spp.	sweet clover	*M. officinalis*: Evaluated but not listed	Disturbed areas, freshwater marshes
Nicotiana glauca	tree tobacco	Moderate	Disturbed areas, riparian forest
Silybum marianum	milk thistle	Limited	Disturbed areas, riparian scrub
Sonchus spp.	sow-thistle	*S. asper*: Evaluated but not listed	Disturbed habitat
Tamarix spp.	tamarisk	*T. parviflora*: High *T. ramosissima*: High	Riparian areas, desert washes, coastal scrub
Torilis nodosa	knot hedge-parsley	Moderate	Woodland

Nonnative grassland is common in upland areas in the BSA. Common invasive species in nonnative grasslands include wild oats (*Avena* spp.), mustards (*Brassica* spp. and other members of the family *Brassicaceae*), brome grasses, and filarees (*Erodium* spp.). These species can also extend into areas of native vegetation, including coastal sage scrub, oak woodland, and chaparral. Other common invasive species in upland areas include tocalote (*Centaurea melitensis*), milk thistle, and knot hedge-parsley (*Torilis nodosa*). Invasive eucalyptus species (*Eucalyptus* spp.) are also found in upland areas. Often, dense stands of eucalyptus form with little understory due to the shading and chemical inhibition of the leaf and bark litter, which is copiously produced.

Although not recorded within the BSA, invasive aquatic plant species with potential to occur include hydrilla (*Hydrilla verticillata*), Eurasian milfoil (*Myriophyllum spicatum*), and water-hyacinth (*Eichhornia crassipes*). These species are adventives in slow-running streams or permanent ponds within cismontane San Diego County.

3.25.3 Environmental Consequences

Both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative could result in increased invasive species intrusion. Short-term impacts from construction include ground disturbance and removal of native species, which can facilitate the establishment of invasive plant species. Invasive plant propagules (e.g., seeds, bulbs,

rhizomes) may be inadvertently introduced via construction equipment or workers. Construction activities may also increase the risk of fires, which can cause disturbance to native vegetation and assist the spread of invasive species. Seed mixes used to revegetate areas after construction may be contaminated with seeds of invasive species.

Operation of the completed highway could result in long-term impacts related to invasive species. The widened highway would facilitate more traffic, increasing the chance of invasive plant propagules being transported into the area by vehicles. Increased use of the area may also lead to increased pedestrian and/or off-road vehicular trespass, increased fire frequency due to human activities (such as smoking), and other human disturbances that may facilitate the establishment and spread of invasive species. The completed highway may alter patterns of water runoff and drainage and/or nitrogen deposition (due to increased vehicle exhaust). The resulting changes in soil moisture and nutrient content could change species compositions in certain areas and trigger the spread of invasive species. None of the species on the California List of Noxious Weeds are currently used by Caltrans for erosion control or landscaping.

3.25.4 Avoidance, Minimization, and/or Mitigation Measures

A qualified biologist would monitor the site immediately prior to and during construction to identify the presence of noxious weeds and recommend measures to control their spread. Precautions may be taken if invasive species are found in or adjacent to the construction areas to avoid the inadvertent spread of invasives. Such precautions may include the inspection and cleaning of construction equipment and use of eradication strategies. Noxious weeds found growing within the project right-of-way during construction would be removed. Heavy equipment such as loaders and graders may be used for removal of invasive species in areas where noxious plant density is high. Manual removal would be used in areas with limited invasive plant populations.

All plants used in the postconstruction landscaping and mitigation areas would comply with federal, state, and County laws requiring inspections for invasive species. The vendor would supply certification of inspection from County of San Diego Agriculture. Species identified in the Cal-IPC database (Cal-IPC 2006) would not be incorporated into the planning scheme. Graded habitat adjacent to the corridor would be revegetated with an appropriate native plant mix. Revegetation with native plant species would occur as early as possible following grading and be accompanied by periodic monitoring and maintenance.

The extent to which invasive plant removal is included as a project permit condition for the proposed construction would be determined through consultation with the resource agencies. Table 3.25-2 provides an overview of removal and control measures for common invasive species in the project area, derived from Invasive Plants of California's Wildlands.

Precautions would be taken where invasive species are found in or adjacent to the construction areas to avoid the inadvertent spread of invasive species. Such precautions may include the inspection and cleaning of construction equipment and use of eradication strategies. Caution would also be taken to ensure that imported fill does not contain invasive species.

Table 3.25-2. Invasive Species Control Measures

Scientific Name	Common Name	Control Measures
Arundo donax	giant reed	Physical control measures such as hand-pulling are effective for small infestations, but rhizomes can be 3 to 10 feet in depth and resprout readily if not removed. Chemical treatment is effective (glyphosate in a form safe to use near water is recommended). Prescribed burning is not recommended, as it favors the rhizomatous giant reed and may worsen the infestation.
Avena barbata	slender wild oat	Physical and chemical control measures are not practical over large expanses, especially when intermixed with native species.
Brassica spp.	mustards	Hand-pulling may be effective in limited areas when seed banks have been suppressed. Prescribed burning and grazing are of limited effectiveness due to the continued survival of soil seed banks. The early seasonal development of most mustards might make early chemical control a possibility, especially when desirable native species have not yet begun to develop.
Bromus spp.	brome grasses	Seedlings can be pulled before they produce seeds, but this is practical only on a small scale. Prescribed burning aids the establishment of brome grasses in most cases, although spring burning may help in control. Various herbicides, including glyphosate, have been used to control invasive brome grasses, but they are either not practical to use over the large areas typically infested or not currently registered for wildland use.
Centaurea melitensis	tocalote	Mowing or weed eating can be used effectively if conducted at a stage where 2 to 5 percent of the plants are flowering (after bolting and before seed is set) and plant is cut below lowest branch.
Cynodon dactylon	Bermuda grass	None specified.
Erodium spp.	filaree	None specified.
Eucalyptus spp.	eucalyptus	Removing trees is a difficult and expensive task and must be followed with measures to control stump sprouting. Stump grinding can be used to eliminate sprouting where there are few stumps and the terrain is gentle. Control of sprouting for larger infestations or in difficult terrain can be achieved by application of triclopyr or glyphosate to the outer portion of the stump's cut surface at time of tree felling.
Hirschfeldia incana	short-pod mustard	None specified.
Lactuca serriola	prickly lettuce	None specified.
Melilotus spp.	sweet clover	None specified.
Nicotiana glauca	tree tobacco	None specified.
Silybum marianum	milk thistle	None specified.
Sonchus spp.	sow-thistle	None specified.
Tamarix spp.	tamarisk	Saltcedar is difficult to kill with mechanical methods, as it is able to resprout vigorously following cutting or burning. Root plowing and cutting may be effective if combined with follow-up treatment with herbicide. Shrubs can also be cut near the ground and treated with triclopyr. Imazapyr can be applied to the foliage in combination with a glyphosate herbicide.
Torilis nodosa	knot hedge-parsley	None specified.

3.26 ENERGY

3.26.1 Regulatory Setting

The CEQA Guidelines, Appendix F, Energy Conservation, state 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 substantial impacts to the environment, including energy impacts.

3.26.2 Affected Environment

According to the EIR for the SANDAG 2030 RTP, Pathways to the Future, the San Diego region relies primarily on oil to meet its transportation needs; however, diesel, compressed natural gas, electricity, biodiesel, ethanol, and hydrogen are also consumed. The transportation sector accounts for more than half (53 percent) of the energy consumed in the San Diego region. Motor vehicles are the largest consumer of fuels in the region, and gasoline accounts for more than 90 percent of the energy consumed by transportation sources. About 80 percent of gasoline is consumed by light-duty passenger cars and trucks. Medium- and heavy-duty trucks, motorcycles, and buses account for the remainder of gasoline consumption. The region's existing gasoline consumption is approximately 4.4 million gallons of gasoline per day, or about 1.6 billion gallons per year. According to data provided in the 2030 RTP EIR, the existing total on-road fuel consumption per capita is 1.45 gallons per day (SANDAG 2007).

After gasoline, diesel fuel is the most used transportation energy source, accounting for approximately 12 percent of existing consumption. The primary consumers of diesel fuel in transportation are heavy-duty trucks, with medium-duty trucks, buses, light-duty passenger cars, and railway locomotives accounting for the remaining diesel fuel consumption. The region currently consumes approximately 1.5 million gallons of diesel per day, or about 547 million gallons per year.

The region has a limited number of public alternative fuel stations. Alternative fuels are defined as fuels not derived from petroleum, such as natural gas, ethanol, and electricity. Most alternative-fuel facilities in the San Diego region supply compressed natural gas or electricity. Public access to biodiesel, ethanol, or hydrogen is more limited. The region's limited alternative-fuel infrastructure severely constrains the use of alternative-fuel passenger vehicles.

3.26.3 Environmental Consequences

The use of energy in Caltrans highway improvement projects can generally be divided between construction, operational, and maintenance activity energy uses. When considering the improvement of existing highway facilities, energy used during construction, operation, and maintenance can be weighed against the energy saved by relieving congestion and other transportation efficiencies that come with improved roadway facilities.

According to the EIR for the SANDAG 2030 RTP, Pathways to the Future, multiple factors may influence future transportation-related energy-consumption patterns. These factors include, but may not be limited to, the following:

1. State and federal regulatory actions
2. Local land use decisions
3. Technological improvements
4. Regional economic conditions
5. Fuel efficiency and fuel-source of private automobiles
6. The price of oil, gasoline, diesel, electricity, and other fuels
7. The source of the region's electric power
8. The amount of oil imported by the United States and others

In addition, the regional population is expected to increase by approximately 918,000 people, or 29.93 percent, by 2030, which means that the regional transportation network would accommodate a larger number of users in 2030 than under existing conditions. Implementation of transportation improvements may increase total gasoline consumption by approximately 505 million gallons per year, or 31.26 percent. Total diesel consumption may increase by about 48.7 million gallons, or 25 percent. The daily total of fuel consumption per capita would increase by 4.3 percent under the proposed 2030 RTP. However, the 4.3 percent increase per capita demonstrates that the proposed 2030 RTP would result in greater energy consumption than the existing transportation system when accounting for projected population growth. Although energy consumption would increase under the proposed 2030 RTP, transportation improvements are designed to improve energy efficiency of the regional transportation system by increasing use of more fuel-efficient public transit, carpools, and vanpools, and by improving the circulation system level of service.

Build Alternatives

The build alternatives would both require the use of energy for project construction in a generally similar nature, but would vary in degree. The energy expenditure for construction of the Southern Alignment Alternative would include the need for two overpasses, increased earthwork, and additional construction materials. Overall energy use throughout the operational life of the project would be similar for the two build alternatives.

The postconstruction energy consumption for both build alternatives would result in energy savings in the long term. The increased road capacity would reduce travel times for motorists and provide for less vehicle operating time, thus reducing fuel consumption. The additional Park and Ride lot proposed for the southwestern portion of the interchange of SR-76/I-15 would facilitate ride-sharing and carpooling, and reduce single-occupancy-vehicle miles on SR-76 and I-15, thereby further reducing postconstruction fuel consumption. These savings would be compounded by the increased level of service provided at the improved intersections and on the links between the intersections. To improve traffic flow, traffic signals would be interconnected. Interconnecting the signals as a system would optimize the efficiency of the light timing, which would allow for optimal processing of cars and reduced queue times where vehicles must idle. Additional savings would result from fewer vehicle stops and starts, which is the most wasteful condition in terms of fuel use. Also, light emitting diode (LED) lights would be used in the traffic signals. Traffic signals that use LED lights consume 80 to 90 percent less energy and generally last 5 to 7 years, compared to just 1 year for a comparable incandescent light signal (Consortium for Energy Efficiency 2007).

The short-term use of energy to improve roadways results in long-term energy savings through the more efficient flow of traffic. As described above, the savings in operational energy requirements would offset the energy used for construction and would result in a net savings in energy use in the long term.

No Build Alternative

The No Build Alternative would not require any energy consumption for construction, as none would occur. However, long-term energy consumption related to fuel use would be greater for the No Build Alternative as compared to either of the build alternatives, as congestion and traffic flow conditions would continue to worsen. The No Build Alternative would not include expansion of the existing or construction of the additional Park and Ride facility, and would not encourage further ride sharing, adding vehicle miles and fuel consumption to both SR-76 and I-15.

3.26.4 Avoidance, Minimization, and/or Mitigation Measures

Because no energy impacts were identified for implementation of either build alternative, no associated avoidance, minimization, or mitigation measures are proposed. However, Caltrans is incorporating energy-saving measures into the project as described below.

In addition to the increased number of lanes, both build alternatives also include channelization lanes where appropriate, and signals where warranted to improve traffic flow and reduce queue lengths at intersections. LED use in signal lighting would reduce consumption of electricity.

The project also includes bicycle and pedestrian facilities to support these alternative means of transportation and reduce reliance on motor vehicles. In addition, the project includes expansion of the existing Park and Ride facility near the interchange of SR-76 and I-15, which would facilitate ride-sharing and carpooling opportunities and reduce single-occupancy vehicle miles and fuel consumption.

Caltrans is proposing to reuse and incorporate existing materials (those that can be) into the final product. Currently, opportunities include the use of the existing materials in the roadway base and the incorporation of solid rock into the proposed erosion/slope protection measures. To ensure the maximum use of this concept, the processing of materials on-site would be allowed. Any pavement and construction debris that is removed would be hauled back to the materials plant for recycling or reuse, or it would be broken into smaller pieces and buried in the deep fill. Recycling saves the fuel and materials that would have been required to create new materials. Using the existing on-site material avoids the need to have additional material trucked into the project area or excess material trucked away from the project area.

The overall design goal would be to balance the project's cut and fill to negate either shortage of or having excess material. This would eliminate unnecessary trucking. Caltrans could allow excess material to be absorbed by local materials processors, if feasible, to avoid the need to have it hauled away from the project area and disposed of in an appropriate location.

Another savings component related to construction staging would be the use of, to the maximum extent possible, the existing drainage and traffic control devices. This would reduce the need to construct temporary facilities out of new materials.

Where feasible, Caltrans would use drought-tolerant plants and sculpted/serrated slopes to reduce the need for irrigation and the likelihood of invasive species.

Caltrans recently identified ways to incorporate a greener construction fleet and is developing construction specifications by which construction-related emissions would be reduced. To the extent they are available and appropriate, the green specifications would be considered for incorporation into the various construction contracts that would be issued for the project.

Caltrans is also proposing several features that would reduce the long-term maintenance needs of the project, which in turn would reduce the long-term use of resources. These include concrete median barriers, overhead video-based detection, and minimal light installation.

Because the project would reduce long-term energy use through improved traffic conditions along the SR-76 corridor, its associated intersections, and I-15, the project would be consistent with energy efficiency policies, including the Caltrans Director's Policy on Energy Efficiency, Conservation, and Climate Change (DP-23-R1 June 2007):

> The California Department of Transportation incorporates energy efficiency, conservation, and climate change measures into transportation planning, project development, design, operations, and maintenance of transportation facilities, fleets, buildings, and equipment to minimize use of fuel supplies and energy sources and reduce greenhouse gas 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.

3.27 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Project implementation would result in attainment of long-term transportation objectives at the expense of some short-term social, economic, aesthetic, biological, noise, water quality, and other land use impacts. The need for these long-term transportation improvements is based on the current poor operating conditions of the SR-76 corridor between South Mission Road and I-15, and is necessary to ensure safe and efficient local and regional movement of people and goods. The forecasted population increase throughout the project area is substantial, and the planned expansion of residential and commercial development within areas surrounding the corridor underscores the need for safe, reliable regional mobility.

3.27.1 Build Alternatives

The build alternatives would have similar short-term impacts. These impacts would vary in degree and severity for each alternative alignment but are generally similar.

Short-term impacts would include economic loss experienced by local businesses due to detoured traffic, inconvenient access, and/or business relocation; traffic delays and detours; limited access by bicyclists and pedestrians; construction impacts to biological and wetland resources, visual quality, water quality, and increased noise levels; and general access and travel inconveniences. Long-term effects would include impacts to community character and cohesion; residential relocation; reduction in open space, farm land, agricultural land, biological resources, and wetlands; energy and fuel use; and irrevocable use of construction materials including concrete, steel, and asphalt.

Short-term benefits would include increased job creation and increased local revenue generated during construction activities. Long-term benefits would include improvement to the transportation network in the area, reduction of congestion, better intersection circulation, ability of transportation facilities to support future planned development, and the opportunity to coordinate mitigation and enhancement of the San Luis Rey River Park during the planning process and provide a compatible connection between planned park uses and access to the proposed highway.

3.27.2 No Build Alternative

The no build alternative would offer none of the gains nor have the losses listed above. It would not, however, resolve worsening congestion on local streets and highways.

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3.28 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED PROJECT

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended for the construction of a highway facility. Additionally, large amounts of labor and natural resources are used in the making of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use for the proposed project would not have an adverse effect on continued availability of these resources. Any construction would also require a substantial one-time expenditure of both state and federal funds, which are not retrievable. However, savings in energy and time, and a reduction in accidents, would offset this commitment of fiscal resources. In addition to the initial costs of construction, there would be ongoing costs for roadway maintenance, including pavement, roadside litter/sweeping, signs and markers, and electrical and storm maintenance.

3.28.1 Build Alternatives

Implementation of the SR-76 South Mission Road to I-15 Highway Improvement Project involves the commitment of a range of natural, physical, human, and fiscal resources. The commitment of these irretrievable resources for the build alternatives would vary in degree and amount, but are generally similar. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land could be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

The commitment of resources is based on the concept that residents of the immediate area, region, and state would benefit from the improved quality of the transportation system. These benefits would consist of improved accessibility, safety, and regional mobility for people and goods, which are expected to outweigh the commitment of these resources.

3.28.2 No Build Alternative

The No Build Alternative would not require the commitment of resources discussed above. It would not, however, offer the benefits identified from an improved quality of transportation system, including improved accessibility, safety, and regional mobility for people and goods.

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3.29 CUMULATIVE IMPACTS

3.29.1 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 project 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 and cohesion, 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 CEQ Regulations.

3.29.2 Affected Environment

Information on past, present, and reasonably foreseeable future projects and identified project impacts were gathered at the County of San Diego Department of Planning and Land Use (DPLU) through review of available environmental documentation (conducted in July 2009) and coordination with County DPLU staff. This information was also updated in October 2011. A summary of project design information and identified project impacts is shown in Table 3.29-1. The locations of the cumulative projects are shown in Figure 3.29-1.

Methodology

Geographic Scope of the Cumulative Effects Analysis

For this analysis, a geographic scope for each cumulative effects issue was established. The resource study area (RSA) generally is based on the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope may be different for each cumulative effects issue. The geographic scope of cumulative effects often extends beyond the scope of the direct effects, but not beyond the scope of the direct and indirect effects of the proposed project and alternatives. However, if the proposed project and alternatives are determined to have no direct or indirect effects on a resource, no further cumulative effects analysis is necessary. RSAs are defined in Section 3.29.3 for each resource listed below. Because RSAs vary for different resources, not all of the projects listed in Table 3.29-1 would be located within the RSA defined for a particular resource. RSAs are shown in Figure 3.29-1.

Table 3.29-1. Cumulative Impacts Project List

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
1. Peppertree Park	At Board of Supervisors hearing on Specific Plan Amendment for final 48 dwelling units on May 19, 2010, continued for 6 months.	County of San Diego; East of South Mission Road at Peppertree Lane.	Involves 163 acres of residential development, 15 acres of office and commercial uses. 219 dwelling units built and occupied, 48 more not yet approved.	*Visual/Aesthetics* – Grading and erosion activities would create 725,000 cubic yards of cut/fill manufactured slopes ranging up to 64 feet in height which are not sensitive to the natural top. Environmental analysis found substantial visual impacts to the residential lots. *Hydrology and Floodplains* - Some residential lots located within the floodplain. Environmental analysis found substantial flooding impacts to Ostrich Farm Creek. *Natural Communities* – The project would directly impact 5 percent of on-site willow riparian woodland, freshwater pond, and freshwater marsh vegetation on-site; mitigation would reduce impacts to less than substantial.
2. Pala Mesa Resort	County letter dated May 13, 2008, determined CEQA Extended Initial Study to be incomplete.	County of San Diego; 2001 Old Highway 395, between Canonita Drive/ Stewart Canyon Road and Pala Mesa Drive.	Specific Plan Amendment for Pala Mesa Private Development Plan for 78 condo/hotel units, spa with 30 hotel suites, 148 townhomes, improvements to lodge with 54 hotel rooms, and amenities improvements.	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
3. Warner Ranch Multiple-Use Development	NOP filed on April 29, 2010. County scoping letter for EIR sent August 17, 2007. EIR not yet prepared.	SR-76, approximately 5 miles east of I-15.	Includes 224 multi-family and 556 single-family units, 10.8 acres of private park, 8.4 acres of community park, 344.5 acres of on-site biological open space preserve.	The proposed project, in conjunction with this project, may have cumulative impacts related to land use, visual/aesthetics, cultural resources, hydrology and floodplains, and biological resources. However, the EIR is not yet prepared. At the time of this evaluation, the level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
4. Pala Casino Expansion	Final Tribal EIR certified March 28, 2007. Project completed in May 2009.	SR-76, approximately 5.5 miles east of I-15.	Addition of 1,500 parking spaces, 50 hotel rooms, 70,000 square feet of casino; improvements to SR-76.	The proposed project in conjunction with this project may have cumulative impacts related to cultural resources.
5. Pauma Casino and Hotel	Final Environmental Assessment in April 2008. Project on hold.	Pauma Indian Reservation; 777 Pauma Reservation Road, Pauma Valley, California.	Involves 73,583 square feet of new gaming area; 19-story hotel, 384 rooms and 16 suites; spa, pool, and gardens; 1,500-seat events center; conference center; 120,547 square feet of offices; 6-floor 1,500-space parking garage; 2,350 surface parking spaces. Improvements to SR-76 east of I-15 and to I-15/ Pauma Reservation Road intersection.	The proposed project in conjunction with this project may have cumulative impacts related to visual/aesthetics, hydrology and floodplains, and biological resources.

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
6. Meadowood Residential Development	Public review of draft EIR complete. County is preparing responses to public comments. Planning Commission continued August 12, 2011 to October 7, 2011.	County of San Diego; Intersection of SR-76 and I-15.	Approximately 844 multi-family and single-family dwelling units on 389.5 acres; 129 acres of open space preserve and 49.3 acres of agricultural preserve. Possible elementary school in place of 42 single-family dwelling units.	*Cultural Resources* - Implementation of mitigation would reduce the impacts to less than substantial. *Hydrology and Floodplains* - With design measures, BMPs, and County Watershed Protection, Stormwater Management, and Discharge Control Ordinance conformance, direct impacts would be less than substantial. *Natural Communities* - Impacts to 0.1 acre of willow/mulefat scrub, less than 1 acre of southern willow scrub, 3.7 acres southern arroyo willow riparian forest, and 0.9 acre freshwater marsh, mitigated through Wetland Mitigation Plan. *Wetlands and Other Waters* - Permanent impacts to 3.12 acres of USACE jurisdictional waters and wetlands; permanent impacts to 3.22 acres of CDFG jurisdictional waters and vegetated riparian habitat; mitigation through Wetlands Mitigation Plan. *Animal Species/Threatened and Endangered Species* - Removal of 14.5 acres (13.5 acres critical) of gnatcatcher habitat; removal of 3.7 acres of occupied least Bell's vireo and southwestern willow flycatcher habitat. Indirect impacts to marginal but occupied habitat for western spadefoot toad; impacts would be less than substantial.
7. Gregory Canyon Landfill	Project approved, in litigation.	County of San Diego; Gregory Canyon, 3 miles east of I-15, on SR-76.	Project is a 1,770-acre landfill.	*Visual/Aesthetics* – Implementation of mitigation would reduce the impacts to less than substantial. *Cultural Resources* - Implementation of mitigation would reduce the impacts to less than substantial. *Hydrology and Floodplains* - Grading of the river channel will reduce flooding impacts to a less than substantial level. BMPs would be employed to reduce the potential impacts of flooding and erosion. *Natural Communities* - Impacts to 2.4 acres of southern willow scrub and 0.2 acre of open channel mitigated to less than substantial. *Wetlands and Other Waters* - EIR found impacts to 0.434 acre of USACE wetlands and 2.251 acres of USACE waters of the U.S. mitigated to less than substantial through preservation and creation and restoration and/or enhancement; USACE requiring additional study. *Animal Species/Threatened and Endangered Species* - Potential loss of individual southwestern arroyo toads; habitat and breeding areas for arroyo toad, least Bell's vireo, southwestern willow flycatcher, and golden eagle; impacts mitigated to less than substantial.
8. Rosemary's Mountain - Palomar Aggregates Quarry	Project approved. EIR and EIR Addendum approved in 2002. Currently under construction.	County of San Diego; North side of SR-76, 1.25 miles east of I-15.	Project is a 96.4-acre aggregate quarry including relocation and widening of 1.25 miles of SR-76 between project and I-15.	*Cultural Resources* - Implementation of mitigation would reduce the impacts to less than substantial. *Hydrology and Floodplains* - Increased runoff and sedimentation mitigated through use of sediment basins. *Natural Communities* - Environmental analysis found impacts to 0.3 acre of southern willow scrub and 2.5 acres of freshwater marsh; mitigation would reduce impacts to less than substantial. *Animal/Threatened and Endangered Species* - Potential impacts to least Bell's vireo and southwestern willow flycatcher due to habitat loss.

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
9. Pala Mesa Highlands	EIR approved by County Board of Supervisors June 20, 2007.	County of San Diego; West of Old Highway 395 between Pala Mesa Drive and Via Belamonte.	Development of 130 single-family residential units on 48.1 acres of 85.6 acres in the Pala Mesa Private Development Plan. Improvements to intersection of Old Highway 395/SR-76 and project frontage on Pala Mesa Drive and Old Highway 395.	*Land Use* - Specific Plan Amendment and Zone Reclassification required for consistency with land use plans. *Hydrology and Floodplains* - Potential impacts were identified related to storm water drainage. *Wetlands and Other Waters* - Environmental review found 0.01 acre of non-wetland waters potentially impacted on-site. *Animal Species/Threatened and Endangered Species* - Coastal California gnatcatcher habitat would be disturbed.
10. Palomar Community College – North Education Center	Final EIR certified June 2008. Some buildings, sports fields, and parking spaces to open in 2011.	County of San Diego; northeast of intersection of SR-76/I-15.	Development of extension community college campus on 85-acre site with a total of 380,000 square feet of buildings by 2030. Initial development of approximately 75,000 to 150,000 square feet and related parking.	*Cultural Resources* - The project would result in substantial impacts on cultural resource site CA-SDI-682 and unknown historic resources at CA-SDI-16890. Mitigation would reduce impacts to less than substantial. *Paleontology* - Implementation of the project could result in substantial impacts to unknown paleontological resources during grading and improvement activities. Mitigation would reduce impacts to less than substantial. *Natural Communities* - Impacts to 0.58 acre of alkali meadow, 0.25 acre of coastal freshwater marsh, 0.35 acre of southern cottonwood-willow riparian forest, and 0.42 acre of southern willow scrub. Cumulative impacts on southern cottonwood-willow riparian forest. *Wetlands and Other Waters* - Impacts to USACE/CDFG jurisdictional wetlands include 0.26 acre of alkali meadow, 0.15 acre of coastal freshwater marsh, and 0.07 acre of southern cottonwood-willow riparian forest. Impacts to CDFG-only jurisdictional wetlands include 0.31 acre of southern willow scrub; mitigation will reduce impacts to less than substantial. *Animal Species/Threatened and Endangered Species* - Impacts to 0.50 acre of coastal California gnatcatcher occupied habitat. Potential impacts to least Bell's vireo and southwestern willow flycatcher in breeding seasons; mitigation provided to reduce impacts to less than substantial.
11. Campus Park (Passerelle) Multiple-Use Development	Final EIR certified and County Board of Supervisors approved May 11, 2011.	County of San Diego; Intersection of SR-76 and I-15.	Mixed-use development on 416.1 acres with 1,076 single- and multi-family dwelling units, community center with retail and 157,000 square feet of office space, and a number of recreational amenities. Project has two development options with different impacts (Option 1 and Option 2).	*Cultural Resources* - Implementation of mitigation would reduce the impacts to less than substantial. *Hydrology and Floodplains* - Development in floodplain of Horse Ranch Creek, not mapped by FEMA, would raise 100-year flood level 4.4 feet; impacts mitigated to less than substantial. *Natural Communities* - Option 1: impacts to 9.2 acres of southern riparian forest, 1.66 acres of southern willow scrub, and 6.6 acres of freshwater marsh. Option 2: impacts to 10.5 acres of southern riparian forest, 1.66 acres of southern willow scrub, and 7.9 acres of freshwater marsh. *Wetlands and Other Waters* - Option 1: Impacts to 16.7 acres of USACE wetlands and waters of the U.S. and to 10.1 acres of CDFG wetlands and waters. Option 2: Impacts to 20.8 acres of USACE wetlands and waters of the U.S. and to 11.4 acres of CDFG wetlands and waters; mitigation will reduce impacts to less than substantial. *Animal Species/Threatened and Endangered Species* - Both options: impacts to 1 individual of least Bell's vireo, 1 pair of coastal California gnatcatchers, and 46.25

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
				acres of coastal California gnatcatcher habitat.
12. Campus Park West Multiple-Use Development	NOP for EIR and Environmental Update Review Checklist Form issued June 2009.	County of San Diego; Northeast of SR-76 and I-15 interchange.	Involves 118 acres, including 355 residential units, 400,000 square feet of commercial, 347,000 square feet of industrial, 50,000 square feet of office space, 11 acres of common open space, and 47 acres of natural open space.	The proposed project in conjunction with this project may have cumulative impacts related to land use, visual/aesthetics, cultural resources, hydrology and floodplain, hazards and hazardous materials, and biological resources. However, the EIR is currently being prepared. At the time of this evaluation, the level of information available regarding this project was insufficient to determine the project's potential cumulative impacts. As such, a cumulative impact analysis for this issue area could not be conducted.
13. Lake Rancho Viejo	In County planning process. EIR not yet prepared.	County of San Diego; Intersection of SR-76 and I-15. Part of constructed project with 450 residences and community amenities constructed.	Residential development of 100 single-family residences.	The proposed project in conjunction with this project may have cumulative impacts related to cultural resources and biological resources. However, the EIR has not been prepared. At the time of this evaluation, the level of information available regarding this project was insufficient to determine the project's potential cumulative impacts. As such, a cumulative impact analysis for this issue area could not be conducted.
14. San Luis Rey Wastewater Treatment Plant	Final EIR certified August 2007. Subsequently decertified. Project will not be developed.	San Luis Rey Water District; Either side of San Luis Rey River Valley east and west of Pankey Road.	Construction of 3-acre wastewater treatment plant and two 15-acre percolation ponds.	No impacts are anticipated since this project is considered not reasonably foreseeable.
15. Envirepel Fallbrook Renewable Energy Facility (FREF)	Project undergoing data adequacy review with the California Energy Commission. No environmental documents finalized. Permitting is proposed to start in the fourth quarter of 2011, with construction of the extensive facility is anticipated in early 2013.	County of San Diego; South of San Luis Rey River and east of Pankey Road.	Multi-purpose energy facility converting biomass materials into thermal electricity via a low emissions process. The facility would be located on 80 acres of existing citrus orchards.	The proposed project in conjunction with this project may have cumulative impacts related to cultural resources and biological resources. However, the EIR has not been prepared. At the time of this evaluation, the level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
16. Brook Hills	Project approved. Negative Declarations approved in 1993 and 2003. 2004 Notice of Determination found no substantial impacts. Includes 219 residential units, most constructed, 35 currently under review.	County of San Diego; 1815 Via Monserate.	Major subdivision of 281 acres into 219 lots.	*Animal Species/Threatened and Endangered Species* - Potential for coastal California gnatcatcher, least Bell's vireo, and Stephens' kangaroo rat, but species not identified on-site.

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
17. San Luis Rey River Park Master Plan	Program EIR (PEIR) on conceptual plan certified September 24, 2008.	County of San Diego; An 8.5-mile stretch of the San Luis Rey River between the Oceanside municipal boundary and I-15.	Master plan of conceptual design to preserve and conserve passive open space habitat, establish multi-use pedestrian trails, and develop a series of five active-use parks in disturbed areas with minimal impact on environmental resources.	*Cultural Resources* – Direct impacts could occur to any such sites as a result of construction activity that would disturb or destroy all or part of the sites. Multi-use trail locations are conceptual at this stage of the project, but they can be designed to avoid providing public access near known historical resources and sites. Despite these measures for protecting historical resources, substantial impacts to historical resources could still result. *Natural Communities* - Potentially substantial impacts to riparian habitats; mitigation would include evaluation and monitoring to avoid impacts. *Wetlands and Other Waters*- PEIR found potentially substantial impacts to waters of the U.S. and wetlands. Conceptual plan: acreage not known. Mitigation would reduce impacts to less than substantial through avoidance in design, monitoring, and restoration or preservation. *Animal Species/Threatened and Endangered Species* - San Diego ambrosia, arroyo toad, coastal California gnatcatcher, southwestern willow flycatcher, least Bell's vireo, Stephen's kangaroo rat detected or with high potential to occur. Mitigation requires design to avoid impacts. *Coordination Efforts between Caltrans and the County of San Diego* - Since 2005, representatives of the County of San Diego have attended Caltrans Project Development Team meetings, National Environmental Policy Act (NEPA) 404 integration meetings and other planning and miscellaneous meetings in order to coordinate the two projects simultaneously. Documents prepared by the County of San Diego such as the San Luis Rey River Park Master Plan and the Programmatic Environmental Impact Report for the San Luis Rey River Park also discuss these coordination efforts.
18. SR-76, I-5 to Melrose Drive Improvement Project	Phase I, I-5 to Foussat Road, completed in 1996. Phase II, Foussat Road to Melrose Drive, completed in 1999.	Caltrans; I-5 to Melrose Drive in City of Oceanside.	Widen and realign SR-76 to four-lane expressway to North Santa Fe Avenue and four-lane conventional highway from North Santa Fe Avenue to Melrose Drive.	*Natural Communities* - Direct impacts to 12.4 acres of southern willow scrub, cismontane alkali marsh, mulefat scrub, and freshwater marsh; mitigation reduced impacts to less than substantial. *Wetlands and Other Waters* - Clean Water Act Section 404 and California Fish and Game Act 1602 permits obtained for impacts to jurisdictional waters. *Animal Species/Threatened and Endangered Species* - Impacts to 225 individuals of San Diego ragweed, mitigated by transplantation. Impacts to 4.9 acres of coastal California gnatcatcher critical habitat, mitigated by preservation and restoration. Indirect impact on least Bell's vireo population, mitigated by designing all wetland mitigation as least Bell's vireo habitat.
19. SR-76, Melrose Drive to South Mission Road Highway Improvement Project	Record of Decision for the EIR/EIS issued March 2, 2009. Project is under construction.	Caltrans; Melrose Drive to South Mission Road in City of Oceanside and County of San Diego.	Widen and realign 5.8 miles of SR-76 to a conventional four-lane highway, right-of-way, and paved outside shoulders for pedestrians and bicyclists.	*Land Use* - Less-than-substantial impacts to land use issues. Minor impacts identified with loss of rural character. *Natural Communities* - Permanent impacts to 18.33 acres of southern cottonwood-willow riparian forest, 0.003 acre of disturbed wetland, 3.09 acres of southern coast live oak riparian forest, and 0.13 acre of southern willow scrub. Temporary impacts to 14.32 acres of southern cottonwood-willow riparian forest and 1.54 acres of disturbed wetland. *Wetlands and Other Waters* - Permanent impacts to 1.83 acres of USACE jurisdictional waters and 16.35 acres of permanent impacts to CDFG jurisdictional

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
				waters. Cumulative impacts to wetlands prior to mitigation. *Animal Species/Threatened and Endangered Species* - Permanent and temporary direct and indirect impacts to arroyo toad, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo. Indirect impacts to San Diego ambrosia.
20. Golf Green Estates	Project is still in planning process. County letter dated June 12, 2007: extended Initial Study (IS) and information determined to be incomplete.	County of San Diego; Intersection of Old River Road and Camino Del Rey.	Involves 116 residential lots on 29.45 acres.	The level of information available regarding this project was insufficient to determine the project's potential impacts at the time this evaluation was prepared.
21. Liberty Quarry	Project is in planning phase. NOP and IS issued in June 2007; Draft Environmental Impact Report (DEIR) public review completed September 18, 2009. The future of this project is undetermined at this time.	Riverside County; west of I-15, near Rainbow Valley Boulevard.	Quarry located on 311 acres. Quarry would be nearly 1,000 feet deep and almost 1 mile long. Five million tons of sand and crushed rock would be mined from the site every year for 50 to 60 years, requiring 1,400 daily truck trips.	*Land Use* - The project could be incompatible with existing surrounding land uses. However, with the incorporation of design features such as a landscaped berm and open space buffers and setbacks, impacts would be reduced to less than substantial. *Visual/Aesthetics* – The project could substantially damage scenic resources, obstruct prominent scenic vista or view open to the public, or result in the creation of an aesthetically offensive site that is open to public view and interfere with the nighttime use of Palomar Observatory, which is protected by Riverside County Ordinance No. 655 and San Diego County Ordinance 7155. Implementation of mitigation measures would reduce the impacts to less than substantial. *Cultural Resources* - The project could alter or destroy an archaeological site (Undiscovered Resources); disturb human remains, including those interred outside formal cemeteries; or restrict existing religious or sacred uses within the potential impact area. Implementation of mitigation measures would reduce the impacts to less than substantial. *Paleontology* - The project would have less than substantial impacts to unique paleontological resources/sites or unique geological features. *Hazards and Hazardous Materials* - The project could create a hazard to the public or the environment through inadvertent explosion during routine transport, create a hazard to workers or the environment as a result of accidental explosions of blasting material at the site, create a substantial hazard to the public or the environment from the accidental release of hazardous materials, including hazardous waste, and expose people or structures to a substantial risk of loss, injury, or death involving wildland fires, including where wild land is adjacent to urban areas or where residences are intermixed with wild lands. Implementation of mitigation measures would reduce the impacts to less than substantial. *Natural Communities* - The project could have a substantial adverse effect on riparian habitat and other sensitive natural communities. Implementation of mitigation measures would reduce the impacts to less than substantial. *Wetlands and Other Waters* - The project could have a substantial adverse effect on federally protected wetlands. Implementation of mitigation measures would reduce the impacts to less than substantial. *Animal Species/Threatened and Endangered Species* - The project could substantially interfere with the movement of native resident or migratory wildlife species or with established native resident migratory wildlife corridors. The project

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
				could have a substantial adverse effect on special-status species. Implementation of mitigation measures would reduce the impacts to less than substantial.
22. Orange Grove Power Plant Project	California Energy Commission approved Application for Certification (AFC) of power plant in April 2009. Operational as of April 2010.	County of San Diego; off of Pala Del Norte Road, approximately 3.5 miles northeast of I-5 on SR-76, approximately 2 miles west of the community of Pala. General Plan Amendment area east of I-15 and south of West Lilac Road.	Simple-cycle power with an electrical output of 96 megawatts with connection to adjacent SDG&E Pala substation.	*Land Use* – The project complies with the specific findings required for a Major Use Permit under the County Zoning Ordinance and is consistent with the County General Plan and local land use requirements. *Cultural Resources* - Ground disturbance could impact subsurface extensions of the 14 previously known, potentially CRHR-eligible archaeological sites located on or adjacent to the plant site, the fresh-water pick-up station, and the gas line. Mitigation through archaeological monitoring of construction-related ground disturbance on the project components near these 14 resources would be required. There is a moderate probability that prehistoric and historic-period archaeological deposits could be encountered during construction, implementation of mitigation for newly discovered archaeological resources would reduce those impacts to a less than substantial level. *Hydrology and Floodplains* - AFC found potential soil loss, erosion, and storm water impacts from project site during grading and construction. These impacts would be mitigated to less than substantial with implementation of project BMPs. *Paleontology* - The project owner will implement several mitigation measures to avoid impacts to paleontological resources including worker education, preparing a Paleontological Monitoring and Mitigation Plan, and having a Paleontologic Resource Specialist on-site. *Hazards and Hazardous Materials* - The project will not cause substantial impacts to public health and safety as the result of the use, handling, storage, or transportation of hazardous materials with the implementation of mitigation. *Natural Communities* - Temporary and permanent losses of 9.3 acres of coastal sage scrub and 3.4 acres of nonnative grassland contribute to the substantial cumulative loss of these habitat types in the northern San Diego County region. To compensate for these losses, the Applicant must secure a Habitat Loss Permit from the County of San Diego Public Works Department. *Animal Species/Threatened and Endangered Species* - Nine endangered, threatened, or special-status species were confirmed present at or near the site. They are: Engelmann oak, Parry's tetracoccus, coastal California gnatcatcher, Cooper's hawk, least Bell's vireo, Southern California rufous-crowned sparrow, Southwestern willow flycatchers, San Diego horned lizard, and northern red diamond rattlesnake. An additional two special-status species San Diego desert woodrat and arroyo toad could not be ruled out because suitable habitat is available and surveys did not conclusively demonstrate their absence. Implementation of mitigation would reduce impacts to less than substantial.
23. San Luis Rey Flood Control Project	Water Resources Development Act of 1996 reauthorized the project in 2006. Vegetation management is an ongoing part of the project, and includes arundo removal	Along 7.2 miles of the lower San Luis Rey River in and around the City of Oceanside	A double levee, 5.4 miles long; stone protected channel with a soft bottom; 1,330 feet of parapet walls at the ocean on the north and south levees; six interior drainage ponds; a 5-mile bike trail; and 247 acres of	*Natural Communities* –General measures were developed for the preservation or enhancement of in-stream habitat potentially affected by project activities, include potential realignment of the mowing plan and rotational areas, in-stream habitat enhancement, and relocation of the channel thalweg in select locations. *Wetlands and Other Waters* - Permanently impact (fill) 128-acres (38.016-linear feet, 7.2-miles total project area) of vegetated waters. Temporarily fill 46-acres (38,016-linear feet, 7.2-miles total project area) of unvegetated waters.

Project Name	Project Status	Jurisdiction and Location	Project Development	Environmental Summary
	along much of the San Luis Rey River west of I-15.		conservation lands.	*Animal Species/Threatened and Endangered Species* - The project may affect, but is not likely to adversely affect, the endangered Southern California DPS of steelhead. The project area is not designated critical habitat for steelhead at this time. Southern steelhead adults or juveniles have a low to moderate probability of being found in the project area. The project has impacts to the endangered least Bell's vireo, the endangered southwestern willow flycatcher, and their critical habitat. Mitigation measures to be incorporated into a revised plan for phased vegetation management and periodic and localized sediment removal would minimize or avoid impacts to the habitat of the vireo and flycatcher. The project reduces target flow conveyance in the channel to 71,200 cfs and retains additional vireo and flycatcher habitat in the channel over the previously approved plan.

Time Frame of the Cumulative Effects Analysis

A time frame for each issue related to cumulative effects has been determined. The time frame is defined as the long-term and short-term duration of the effects anticipated. Long-term can be as long as the longest lasting effect. Time frames, like geographic scope, can vary by resource.

Each project in a region has its own implementation schedule, which may or may not coincide or overlap with the construction schedule for the proposed project. This is a consideration for short-term impacts from the proposed project. However, to be conservative, the cumulative analysis assumes that all projects in the cumulative scenario are built and operating during the operating lifetime of the proposed project.

Past actions are projects that have been approved and/or permitted, and that have either very recently completed construction or have yet to complete construction. Present actions are actions that are ongoing at the time of the analysis. Reasonably foreseeable future actions are those for which there are existing decisions, funding, or formal proposals, or which are highly probable based on known opportunities or trends; however, these are limited to within the designated geographic scope and time frame. Reasonably foreseeable future actions are not limited to those that are approved or funded. However, this analysis does not speculate about future actions that are merely possible but not highly probable based on information available at the time of this study.

For this cumulative effects analysis, the time frame considered for cumulative projects includes projects recently approved or completed that are not yet addressed as part of the existing conditions of the area, projects under construction, and projects that are in the environmental review or planning process and for which enough information is available to discern their potential impacts. Projects for which no or insufficient information is known or for which substantial uncertainty exists regarding the project are considered speculative and are not evaluated as part of this analysis.

Cumulative Effects Issues

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 that meet these criteria are land use (Section 3.1); growth (Section 3.4); community character and cohesion (Section 3.6); relocations and real property acquisitions (Section 3.7); visual/aesthetics (Section 3.11); cultural resources (Section 3.12), hydrology and floodplain (Section 3.13); paleontology (Section 3.16); hazardous waste (Section 3.17); natural communities (Section 3.20); wetlands and other waters (Section 3.21); animal species (Section 3.23); and threatened and endangered species (Section 3.24).

Resources that would not be substantially impacted by the proposed project or that are not in poor or declining health would not contribute any potential cumulative impacts and are not further evaluated in this section. These resources include consistency with state, regional and local plans and programs (Section 3.2); parks and recreational facilities (Section 3.3); farmlands (Section 3.5); environmental justice (Section 3.8), utilities and emergency services (Section 3.9), traffic and transportation/pedestrian and bicycle facilities (Section 3.10), water quality and storm water runoff (Section 3.14), geology/soils/seismic/topography (Section 3.15), air quality (Section 3.18), noise (Section 3.19), plant species (Section 3.22), invasive species (Section 3.25), and energy (Section 3.26).

Improvements to the SR-76 Corridor

Transportation improvements have been made along portions of the SR-76 corridor from I-5 to I-15 for numerous years, consistent with the RTP prepared by SANDAG. The westernmost improvement project on SR-76, from I-5 to Melrose Drive, was completed in 1999.

The Final EIR/EIS for the State Route 76 Melrose Drive to South Mission Road Highway Improvement Project, which would widen SR-76 from two lanes to four lanes between Melrose Drive and South Mission Road, was approved by Caltrans on November 26, 2008 (project number 19 in the list of cumulative projects, Table 3.29-1). This segment would connect with the western terminus of this proposed project. Caltrans selected the Existing Alignment Alternative (Preferred Alternative), which would widen the facility to four lanes along the current SR-76 alignment. The improvement project would be constructed in three stages. Final design and right-of-way activities have been completed and construction began in March 2010.

The cumulative impact discussion in the Final EIR/EIS focuses on those resources substantially impacted by the project or those resources currently in poor or declining health or at risk even if the project's impacts are relatively small. Resources substantially impacted by the project are land use, community character and cohesion, hydrology and floodplain, riparian and wetland communities, wetlands and other waters of the U.S. and state, and species afforded protection under the FESA.

3.29.3 Environmental Consequences

Land Use

The proposed project is located within the Bonsall Community Planning Area and the Fallbrook Community Planning Area of unincorporated San Diego County. The hill and valley topography that characterizes the community of Bonsall has resulted in a predominance of low-density estate-type residential lots and agricultural land uses. Also characterizing the Bonsall area are golf courses and numerous equestrian facilities. Commercial activity (two shopping centers) in Bonsall is generally confined to an area known as the Country Town Area.

The community of Fallbrook is typically hilly, with a mixture of residential and agricultural land use designations similar to those of the surrounding areas. Land uses near the proposed project alignments include individual rural residential homes and businesses, golf courses, open space including undeveloped land associated with the San Luis Rey River, and agricultural uses. There currently are no large commercial shopping centers near the proposed project in Fallbrook and there are large contiguous areas of undeveloped land along the current SR-76 roadway within the proposed project limits. The majority of land surrounding the SR-76/I-15 interchange is currently undeveloped.

The western boundary for the land use RSA is near East Vista Way, approximately 3 miles west of the western terminus of the proposed project. This is very close to the boundary of the Bonsall Community Planning Area. This boundary was chosen because of the substantial land use pattern changes west of this area to more urban, dense housing, and commercial developments. The eastern boundary of the land use RSA is the eastern boundary of the Fallbrook Community Planning Area, approximately 2.5 miles east of the SR-76/I-15 interchange. The area east of I-15 was included in the RSA because of several substantial cumulative projects that may occur along the SR-76 corridor in this area (Figure 3.29-1). Eastward from this point, with the notable exceptions of several large Indian casino resorts, the

valley takes on a very rural character. With the exception of the occasional rural residence usually surrounded by orchards, land use farther east in the San Luis Rey River Valley consists of agriculture and open space.

The communities of Bonsall and Fallbrook have been associated with agricultural production and a rural lifestyle since the latter part of the 19th century. Originally, subsistence dry farming predominated. As irrigation districts formed, agriculture intensified. Avocados and nursery-raised flowers became the dominant crops in the region and remain so, although acreage planted in avocados has declined since 1985. There are several large equestrian facilities throughout the RSA. Both the Bonsall and Fallbrook community plans identify preservation of the existing rural character of the communities as a high priority. Large amounts of vacant land south of the current SR-76 roadway within the proposed project limits would remain undeveloped as a part of the proposed San Luis Rey River Park.

A review of current and reasonably foreseeable future land uses in the land use RSA, as described in Table 3.29-1, indicates a gradual intensification of land use in this rural area. Based on projects in the cumulative project list, there are more than 4,000 residential units planned in the land use RSA. Several residential developments are planned in the westernmost portion of the project corridor; however, the most substantial land use intensification would occur in the vicinity of the SR-76 interchange with I-15. Proposed near the interchange are almost 3,500 residential units along with various commercial uses, an energy facility, and an expanded community college campus. As outlined in Section, 3.1, Land Use, SANDAG growth projections for Bonsall and Fallbrook are much higher than the County average of 42 percent, at 83 percent and 76 percent, respectively.

There is a clear trend of development planned in the eastern terminus of the RSA, indicating that substantial future cumulative land use changes would occur regardless of the proposed project. These land use changes would cause the existing rural and agricultural character of the RSA to evolve as more residential developments occur, particularly in the vicinity of major transportation nodes.

The Existing Alignment Alternative (Preferred Alternative) was designed to help relieve future local and regional traffic congestion that would result from current and future (projected) population growth, increased residential development, and increased commercial development, primarily within areas surrounding the SR-76 corridor. The improvement of the transportation facility linking these areas of intensifying land use is a necessary accommodation to higher volumes of vehicle traffic associated with the forecasted growth in the RSA.

The rural, agricultural character of the land use RSA is expected to diminish as more development occurs, particularly in the vicinity of major transportation nodes. The improvement of the transportation facility linking these areas of intensifying land use is a necessary accommodation to the greater vehicle traffic that would be present in the future. The Existing Alignment Alternative (Preferred Alternative) would be consistent with this evolving growth pattern and would also contribute to the cumulative effects of changing land use in the project area. In a rural setting, improvement of a major transportation link between areas of more intense development is likely to increase development pressures along its route. As such, the implementation of the Existing Alignment Alternative (Preferred Alternative) would not result in cumulatively considerable impacts to land use.

The Southern Alignment Alternative would introduce a roadway into a largely undeveloped area south of the current SR-76 roadway. Construction of highways can increase access to adjacent

properties and thus encourage land development near the route. Although the Southern Alignment Alternative proposes no intersections for local access between the existing intersections at South Mission Road and Old Highway 395, developers could propose them and pay their fair share to construct them. South Mission Road and Old Highway 395 are designated in the County Circulation Element for substantial improvement. Development in the vicinity of the intersections north of the river has been planned and proposed independent of the highway improvement project.

The Southern Alignment Alternative would introduce a major new land use element south of the river, displacing Vessels Stallion Farm and converting agricultural and undeveloped land to transportation uses. The implementation of the Southern Alignment Alternative would be a cumulatively considerable contribution to substantial land use changes in the RSA.

Growth

Future population growth within the region has the potential to change the existing rural character of Bonsall and Fallbrook, as well as the region as a whole. SR-76 is the most direct transportation corridor between the rapidly growing, primarily residential communities of southwestern Riverside County and the employment centers of north coastal San Diego County. Substantial increases in population are anticipated in the next 20 to 25 years for the cities and unincorporated northern parts of San Diego County including Fallbrook, Bonsall, Vista, Oceanside, San Marcos, Pauma, Valley Center, and Marine Corps Base Camp Pendleton, and the cities and unincorporated portion of southwestern Riverside County. Since growth is a regional issue, the RSA for assessing cumulative impacts to growth would be broader than the Community Planning Areas of Bonsall and Fallbrook. The RSA would include developments occurring east of and along I-15 and further west along SR-76 towards I-5 (Figure 3.29-1).

Land surrounding the Existing Alignment Alternative (Preferred Alternative) would serve to constrain development surrounding the existing SR-76 roadway. As described above, land surrounding the existing SR-76 roadway is considered undevelopable. Therefore, the natural terrain places physical constraints on the amount of developable land available to accommodate future growth surrounding the existing SR-76 roadway. Additionally, revisions to the land use maps for Bonsall and Fallbrook in the San Diego County General Plan designate changes to land use.

Overall, the Existing Alignment Alternative (Preferred Alternative) would not lead to unforeseen economic and/or population growth within the proposed project area, as it is responding to planned and projected growth in the region. The Existing Alignment Alternative (Preferred Alternative) would not directly tax community services or utilities because adequate planning policies and infrastructure financing tools are available. Furthermore, existing topographical restraints and revisions to the land use maps for Bonsall and Fallbrook in the adopted San Diego County General Plan and project review by the County of San Diego would serve to limit future growth in the area. Implementation of the Existing Alignment Alternative (Preferred Alternative) facilitates planned growth but is not anticipated to influence unplanned growth. As such, the implementation of the Existing Alignment Alternative (Preferred Alternative) would not result in cumulatively considerable impacts to growth.

Land surrounding the existing SR-76 roadway is characterized by its unique topography, which includes steep hillsides and the San Luis Rey River Valley, much of which is considered undevelopable land due to the steepness of the slopes, the river floodplain, and sensitive biological resources. Land south of the San Luis Rey River consists of undeveloped areas and

agricultural land. A large portion of this land is associated with Vessels Stallion Farm, which is an approximately 2,000-acre property whose main operation is breeding race horses.

The Southern Alignment Alternative would respond to planned and projected growth in the region by constructing a new alignment south of the San Luis Rey River in an area with no existing transportation facility. This alignment could facilitate access to an area that is currently rural in character and capacity, thereby generating pressure for development. However, development constraints do exist in the area to curb future growth; portions of the Southern Alignment Alternative would be located within land planned for very-low-density development, land to be preserved by the County of San Diego's Draft NCMSCP, and land addressed in the San Luis Rey River Park Master Plan.

The current and reasonably foreseeable future projects listed in Table 3.29-1 indicate that the area along SR-76 is gradually shifting from rural to more urban. Based on projects in the cumulative project list, there are more than 4,000 residential units, various commercial uses, including casino development and expansion, an expanded community college campus, energy facilities, quarries, and a landfill planned in the RSA. The most substantial land use intensification would occur in the vicinity of the SR-76 interchange with I-15.

However, it is reasonably foreseeable that by introducing a new roadway, the Southern Alignment Alternative could reduce the cost of development along the proposed alignment. Introduction of this new roadway would increase access to the area and increase the likelihood that land designated for preservation in the Draft NCMSCP would be developed. The Draft NCMSCP would continue to constrain potential future development within this area, but selection of the Southern Alignment Alternative could influence limited growth along this new roadway alignment. Additionally, the potential relocation of Vessels Stallion Farm and other associated urban features in an undeveloped rural area could also increase the likelihood that land south of the San Luis Rey River could be developed in the future. Therefore, in conjunction with the shift in rural to more urban development, the Southern Alignment Alternative may influence growth-related environmental effects by accelerating planned growth and would be cumulatively considerable.

Community Character and Cohesion

The RSA for assessing cumulative impacts to community character and cohesion is considered to generally include the Community Planning Areas of Bonsall and Fallbrook. These planning areas encompass the entire project alignment and also include areas east of I-15, where a number of development projects are planned (Table 3.29-1).

Both proposed project alignments are in the Bonsall Community Planning Area and the Fallbrook Community Planning Area of unincorporated San Diego County. Both communities are rural, with dispersed residential development intermixed with agricultural uses and open space. The rural character of both Fallbrook and Bonsall dates back to their settlement in the late 1800s. The area became known for its dairies, wine grapes, olives, avocados, thoroughbred horses, Hereford cattle, bees, and rabbitries (Rivers 1998). Both communities have grown substantially since their origins but have maintained their rural character, and the Bonsall and Fallbrook community plans identify preservation of the rural character of the communities as a high priority.

As described above and in Section 3.6.2, the rural lifestyle and agricultural practices in the Fallbrook and Bonsall communities have remained generally intact as much of the San Diego

region has become more urbanized and developed. However, this slower pace of growth is forecasted to increase, with future growth in these communities anticipated at a more rapid rate than the rest of San Diego County. This trend is also reflected in the number of cumulative projects that are known to be ongoing within the RSA.

A review of the current and reasonably foreseeable future projects in Table 3.29-1 indicates a gradual intensification from rural to more urban. Based on projects in the cumulative project list, there are more than 4,000 residential units planned in the RSA, including several residential developments in the western part of the project corridor; however, the most substantial land use intensification would occur in the vicinity of the SR-76 interchange with I-15. Proposed near the interchange are almost 3,500 residential units along with various commercial uses, an energy facility, and an expanded community college campus.

The Existing Alignment Alternative (Preferred Alternative) would be constructed along the current SR-76 roadway and would not, therefore, divide an established community. It would widen the existing roadway and increase the carrying capacity of this portion of SR-76, which could change the small-town image of the surrounding area. The Existing Alignment Alternative (Preferred Alternative) would alter the visual landscape and increase traffic noise. These community character and cohesion impacts would cumulatively contribute to the change in the rural community character and cohesion if the mitigation proposed below in Section 3.29.4 is not implemented.

The Southern Alignment Alternative would introduce a new transportation corridor, including new bridges, guardrails, drainage structures, and other associated construction components into a largely undeveloped area. The Southern Alignment Alternative would result in the relocation of Vessels Stallion Farm, alter the character of the community, and reduce community cohesion both by affecting views and visual quality within the river valley and by displacing a business representative of the rural character of the community. These changes would substantially alter the community character and cohesion. However, the Southern Alignment Alternative would not divide an existing community since the area south of the river is largely undeveloped and no intersections or cross streets are proposed. When viewed in combination with other development projects within the RSA, the impacts to community character and cohesion of the Southern Alignment Alternative would be cumulatively considerable.

Relocations and Real Property Acquisitions

The RSA for assessing cumulative impacts to relocations and real property acquisitions would be similar to community character and cohesion and include the Community Planning Areas of Bonsall and Fallbrook located in unincorporated San Diego County. Land uses within these planning areas are generally composed of residential homes, equestrian facilities, agricultural land, and open space associated with the San Luis Rey River Valley and hilly topography. A large portion of the land south of the existing SR-76 roadway is associated with Vessels Stallion Farm, which is an approximately 2,000-acre property whose main operation is breeding race horses.

Whenever possible, the Existing Alignment Alternative (Preferred Alternative) has been designed to avoid existing community facilities, businesses, and neighborhoods, thereby minimizing the number of necessary relocations. Implementation of the Existing Alignment Alternative (Preferred Alternative) would not displace any residential or nonresidential structures; however partial property acquisitions to a variety of other properties adjacent to the

current SR-76 roadway would occur. The Existing Alignment Alternative (Preferred Alternative) would require displacement of a mobile hamburger stand, the relocation of a small fruit stand east of Sage Road on the southern edge of SR-76, and relocation of land on Faubus Farms, a horse boarding and training facility located along the southern edge of the current SR-76 roadway. The Existing Alignment Alternative (Preferred Alternative) would acquire land on Faubus Farms that currently is developed with horse corrals; however, space would remain on the property to allow for relocation of these horse corrals on-site. Caltrans would coordinate with the business owners to relocate the fruit stand and horse corrals on the remainder of their property and continue operations. Therefore, impacts associated with the Existing Alignment Alternative (Preferred Alternative) and the impacts of the projects listed in Table 3.29-1 would not be cumulatively considerable for relocations and acquisitions.

As previously discussed, implementation of the Southern Alignment Alternative would result in the displacement of Vessels Stallion Farm and right-of-way acquisitions on parcels containing a roadside fruit stand and Faubus Farms. Because Vessels Stallion Farm is located on agricultural land in cultivation, all facilities associated with Vessels Stallion Farm would have to be relocated, reconstructed, or recultivated on one similarly large continuous property zoned for agricultural uses. It cannot be concluded that adequate relocation resources exist for Vessels Stallion Farm. Mitigation is discussed below in Section 3.29.4.

Even with the implementation of mitigation, the potential relocation of Vessels Stallion Farm and other associated urban features in an undeveloped rural area would also influence the future development of agricultural land south of the San Luis Rey River. Therefore, these relocation impacts, in combination with the impacts of the projects listed in Table 3.29-1, would be cumulatively considerable in the loss of the rural character of the project area and region.

Visual/Aesthetics

The visual setting of the immediate project area is primarily characterized by a rural to semirural environment and varies with the nearby land-use type. Single-family residential neighborhoods, consisting mainly of large single-family homes, can be seen in the surrounding hills north of SR-76. In addition to the residential neighborhoods, there are steep hillsides and rock outcroppings along the north side of SR-76 between Gird Road and Old Highway 395. The area immediately south of SR-76 is primarily characterized by open space and includes dense vegetation associated with the San Luis Rey River bed and a large grassland area in the San Luis Rey River Valley. South of the river valley there are steep hillsides with single-family residences located at the top. Additional residential development and a ranch are located in the river valley. The area described above was chosen to analyze cumulative impacts related to visual resources because it encompasses view from the proposed project viewshed and surrounding areas.

The primary viewers within the project area and the larger viewshed would be the motorists, surrounding residents, commercial employees and patrons, and recreational users. Depending upon the alignment alternative, the impacts would vary in location and magnitude. Generally, the expectations of viewers in the study area are for a cohesive scenic rural experience with minimal distractions and disruptions from the presence of traffic and the scattering of existing residential development and commercial use.

Based on available analysis for both alternatives, the proposed project would noticeably compromise the character and scale of the area, particularly with the selection of the Southern Alignment Alternative. This alternative would introduce a new transportation corridor, new bridge

structures, guardrails, drainage structures, and other associated roadway elements, into a largely undeveloped area. These impacts, combined with extensive landform modification and vegetation removal, would result in substantially reduced visual quality and character. These impacts, and the impacts of the projects listed in Table 3.29-1, would contribute to a cumulative loss of visual quality and urbanization in the project area and region. It is not certain that all the projects listed would be approved and constructed; each project would, under CEQA and/or NEPA, consider measures to minimize impact. Avoidance and minimization measures have been incorporated into the project and are discussed in Section 3.29.4. If the mitigation proposed is not implemented, impacts to visual and aesthetics would be cumulatively considerable.

Cultural Resources

Potential cultural resource impacts are generally associated with short-term (construction) activities such as excavation or grading. However, such impacts would also be considered long-term because the associated loss of resource values would be permanent. The geographic scope for the analysis of the cumulative impacts related to cultural resources is the proposed project area and the RSA would include all of the projects listed in Table 3.29-1.

Cultural resources were only identified within the 500-foot buffer around the Existing Alignment Alternative (Preferred Alternative) APE. There are no cultural resources identified within the Southern Alignment Alternative APE. Based on the records searches (consisting of archaeological and historical records and literature reviews); field surveys; consultation with Native American groups; historical site inventories; and review of historical maps, aerials, and photographs, numerous cultural resources were identified within the study areas. Ultimately, three prehistoric archaeological sites and one bridge were determined to be within the APE. A portion of one prehistoric archaeological site was identified within the APE established for the Vessels Ranch Biological Mitigation Site.

The Existing Alignment Alternative (Preferred Alternative) would result in a finding of No Adverse Effect with Standard Conditions, which would include the establishment of ESAs. Although the sites would not be affected, processing the sites under the No Adverse Effect with Standard Conditions scenario allows Caltrans to avoid the sites and protect them from any project-related activities. The four conditions required to process the sites in this manner have all been met: the boundaries of the sites and the essential features are accurately delineated; the scope and design of the undertaking are well developed and the project's management and engineers have confirmed that the sites can and would be avoided by all construction activities; all appropriate protection measures are defined; and ESA action plans have been developed. Additionally, pursuant to the PA, consultation with the Native American community determined that the establishment of ESAs would adequately protect these sites without the need for other conditions or mitigations. Mitigation is discussed below in Section 3.29.4 and avoidance and minimization measures (detailed in Section 3.12.4) have been incorporated into the project.

Cumulatively, the various projects listed in Table 3.29-1 and shown in Figure 3.29-1 have the potential to impact existing cultural resources; however, each project would be required to comply with regulatory requirements and professional monitoring. Thus, the combination of past, present, and reasonably foreseeable projects with the proposed project would not result in cumulatively considerable impacts to cultural resources.

Hydrology and Floodplain

The proposed project is located within the Lower San Luis Rey hydrologic unit of the San Luis Rey River watershed. The San Luis Rey River watershed is a 558-square-mile drainage. Approximately 25 percent of the land area in the watershed is located west of I-15, including in portions of the cities of Oceanside and Vista, the communities of Fallbrook and Bonsall, and the southwestern portion of Marine Corps Base Camp Pendleton. The only substantial segment of the river to have been channelized is the westernmost segment within the City of Oceanside. A major flood control project has been approved for the lower reaches of the San Luis Rey River. This project would greatly increase the floodwater conveyance capacity of this portion of the river.

The RSA for analysis of hydrology and floodplain impacts includes all of the projects on the cumulative project list. The western end of the RSA is where the San Luis Rey River becomes channelized and is generally surrounded by existing urban development. At the eastern end, the RSA extends downstream from east of I-15 where a large cluster of development at the SR-76/I-15 interchange occurs. Farther east in the hydrologic unit, with the notable exceptions of several large Indian casino resorts, the valley takes on a very rural character. That area exhibits an occasional rural residence, usually surrounded by orchards, but is predominantly agriculture and open space.

The San Luis Rey River within the hydrology and floodplain RSA is unusual in southern California in that it has undergone relatively little channelization. The communities of Fallbrook and Bonsall are expected to experience gradual growth in the future. This growth would result in a reduction in pervious surface and change in drainage, and has the potential to substantially impact hydrology and floodplains. East of I-15, most of the land is owned and managed by government agencies, special districts, and Indian tribes.

The proposed project may affect a 5.5-mile-long stretch of the San Luis Rey River. The total floodplain encroachment for the Existing Alignment Alternative (Preferred Alternative) is 55.9 acres. The model of the Existing Alignment Alternative (Preferred Alternative) ultimately determined that there would be an increase of 3.0 inches in the water surface elevation due to the proposed encroachments. The 100-year flood would still be contained within the existing floodplain boundaries and would not cause a substantial increase in risk to life or property.

The total floodplain encroachment for the Southern Alignment Alternative is 79.2 acres. The Southern Alignment Alternative proposes to bridge the floodplain in two places. The model of the Southern Alignment Alternative showed constrictions from the two proposed bridge crossings to increase water surface elevation in the San Luis Rey River by approximately 7 inches. There would be a slight increase to the existing boundaries of the 100-year flood, and a slight increase to the existing risk to life and property already present within the 100-year floodplain directly upstream from the proposed eastern bridge.

Analysis conducted concerning cumulative hydrology and floodplain issues has revealed that current or foreseeable projects may result in additional impacts within the RSA. The proposed Peppertree Park contains several residential lots located within the floodplain. The environmental analysis conducted for that project found that the project would have substantial flooding impacts to Ostrich Creek Farm due to rechannelization of portions of 24 residential lots. The Campus Park (Passerelle) Multiple-Use Development project is located within the 100-year floodplain inundation area and is traversed by Horse Ranch Creek. Rosemary's Mountain - Palomar Aggregates Quarry would use sediment basins to mitigate increased runoff and

sedimentation. The Meadowood Residential Development, Pala Mesa Highlands, Gregory Canyon Landfill, and Orange Grove Power Plant projects may result in substantial surface water quality impacts that would be reduced to less than substantial through project design features, BMPs, and compliance with applicable permits. Additionally, despite the magnitude of the large Indian casino developments in the upper portions of the watershed, they do not result in floodplain encroachment.

The San Luis Rey River Park would have positive benefits for hydrology and floodplains along the river. The San Luis Rey River Park would include a 1,600-acre preserve that would ensure very little grading or future development would occur within its boundaries. The protection of this large acreage in the river corridor would provide substantial hydrologic benefits to the river, its tributaries, and its receiving waters.

The Existing Alignment Alternative (Preferred Alternative) would potentially cause a minor increase in surface water elevations. The 100-year flood would still be contained within the existing floodplain boundaries; however, in combination with all the other planned development in the RSA, the increase in surface water elevation would not contribute cumulatively considerable hydrology and floodplain impacts if the mitigation proposed below in Section 3.29.4 is not implemented.

The Southern Alignment Alternative's floodplain encroachment would expand the existing floodplain boundaries and cause potential risk to upstream locations. These impacts would not be substantial and would not contribute cumulatively considerable floodplain impacts along the middle reaches of the San Luis Rey River if the mitigation proposed in Section 3.29.4 is implemented.

Paleontology

In addition to actual fossil remains, paleontological resources are considered to include the collecting localities and the geologic formations containing those localities. Research and published geologic maps indicate that the proposed project area is underlain by geologic units from the Cretaceous age, Pleistocene age, and late Holocene age. The project area is largely underlain by unfossiliferous tonalite and granodiorite, as well as recently deposited floodplain and stream channel deposits that are too young to contain fossils. Pleistocene-age older alluvial deposits are mapped as occurring along the northern extent of the study area. Older alluvial deposits were observed in the central portion of the study area in the vicinity of the intersection of SR-76 and I-15. This is the only geologic unit within the study area that has the potential to contain paleontological resources. However, it is also possible that project excavations could impact previously unrecognized older alluvial sediments along the San Luis Rey River Valley. Thus, the RSA for the analysis of cumulative impacts related to paleontological resources would include the list of cumulative impacts listed in Table 3.29-1.

No paleontological fossil localities have been previously recorded within the project area; however, site records indicate 15 previously recorded fossil collecting localities occur within a 5-mile radius of the proposed project. Three of these localities were discovered in sedimentary deposits of the Eocene Santiago Formation, which does not occur within the project area, and 12 were discovered in the correlative older alluvial deposits of late Pleistocene age, which do occur within the project area. The discovery and recovery of fossils from older alluvial deposits west of the project along the SR-76 roadway, and elsewhere within the San Luis Rey River Valley and at other locations in northern San Diego County, indicate the high potential for fossil occurrences in these older alluvial deposits.

Potential paleontological resource impacts from the proposed project would be associated with short-term activities such as excavation and grading, although such impacts would be considered long-term because the associated loss of resource values would be permanent. The proposed project would result in impacts to deposits assigned a major paleontological resource sensitivity (i.e., Pleistocene older alluvial deposits). Avoidance of the areas of potential paleontological resources and the burial of sensitive resources under artificial fill materials would reduce potential adverse impacts. However, these options would likely require either unrealistic realignment of the proposed project or extensive borrowing of suitable fill soils from nearby or distant locations. As such, it is recommended that a Paleontological Mitigation Plan be formulated to develop measures for reducing the proposed impacts (Section 3.29.4). Avoidance and minimization measures have been incorporated into the project and are detailed in Section 3.16.4.

Cumulatively, the various projects listed in Table 3.29-1 could potentially impact existing paleontological resources. However, since each project would be required to comply with regulatory requirements, cumulatively considerable impacts related to paleontology would not occur.

Hazardous Waste/Materials

The RSA for hazardous waste/materials is comprised of the proposed project area because hazardous waste and materials is generally considered a local rather than regional issue. Thus, the use of the cumulative project list is appropriate for the cumulative analysis. Of the 23 cumulative projects listed in Table 3.29-1, the following projects identified the potential for impacts related to hazards or hazardous waste/materials: Campus Park West Multiple-Use Development, Liberty Quarry, and Orange Grove Power Plant Project.

The proposed project would likely encounter groundwater and soil contamination from the existing ExxonMobil service station, asbestos and lead-based paint exposure from demolition activities, surface soil contamination from pesticide usage occurring in parcels associated with agricultural uses. 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. Mitigation is discussed below in Section 3.29.4. Avoidance and minimization measures have been incorporated into the project and are detailed in Section 3.17.4. Similar measures would be required of other projects in the vicinity that contain or are adjacent to known hazardous materials sites. As a result, cumulatively considerable impacts related to the increased exposure of people to public health and safety risks from hazardous materials would not occur.

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. The RSA for the assessment of riparian communities encompasses all of the projects on the cumulative project list. The riparian communities RSA is considered to be contiguous with the Draft NCMSCP planning area, as riparian communities do not conform to political or jurisdictional boundaries and can include large areas across an entire region.

The project area lies within a region of northern San Diego County that can be characterized as a major riparian river corridor with native vegetation communities situated within a larger development matrix. Major land uses in and adjacent to the project area generally include paved

and dirt roads; residential and commercial development; a preserve; golf courses; agriculture, including Vessels Stallion Farm; and natural open space. The largest areas of undeveloped land within this region are found within the river channel and adjacent areas of riparian/upland-transitional vegetation.

Development over time has reduced the amount of riparian communities throughout the region. The effects of this increased urban development have been felt in the San Luis Rey River Valley, although to a lesser extent than in much of western San Diego County.

The regional decline in riparian plant communities and the resulting increase in native species listed as threatened or endangered have resulted in Countywide habitat conservation efforts. The San Diego County MSCP was developed as a regional plan to provide for the long-term preservation of sensitive plant and animal species and natural vegetation in San Diego County while allowing for continued economic development within the region. The MSCP was designed to conserve native vegetation communities and associated species at the programmatic level rather than focusing on the preservation of single species on a project-by-project basis. The MSCP is a cooperative effort developed by the County of San Diego, other local jurisdictions, USFWS, and CDFG.

The Draft NCMSCP is still being developed. The information available concerning the Draft NCMSCP indicates that the importance of natural communities within the San Luis Rey River corridor would be recognized via the designation of the corridor as a Pre-Approved Mitigation Area (PAMA). PAMAs are areas in the Draft NCMSCP with high biological value where conservation is encouraged. This conservation would be encouraged by enforcing mitigation ratios that would direct development to take place outside of the PAMAs and ensure appropriate mitigation within them.

Caltrans is not a signatory to the MSCP or the Draft NCMSCP, but strives for consistency with the goals and objectives in each of the plans. The NCCP Program is the umbrella program that encompasses all regional planning efforts such as the MSCP and the Draft NCMSCP.

The sensitive riparian communities potentially impacted by the proposed project include arrowweed scrub, arundo-dominated riparian, coastal and valley freshwater marsh, disturbed wetland, elderberry scrub, mulefat scrub, nonvegetated channel, open water, southern arroyo willow riparian forest, southern cottonwood-willow riparian forest, southern willow scrub, and tamarisk scrub. Each riparian community would be impacted differently, depending on the project alternative selected. The Existing Alignment Alternative (Preferred Alternative) would result in direct permanent and temporary impacts to 43.12 acres of riparian and wetland communities. The Southern Alignment Alternative would result in direct permanent and temporary impacts to 19.87 acres of riparian and wetland communities, and the County upgrade of the existing SR-76 could add 10.81 acres of impacts. Specific alignment-based comparisons of impacts for each riparian community are provided in Section 3.20.2.

As can be seen in Table 3.29-1, cumulative project impacts would affect many acres of the same types of sensitive riparian communities. For example, Peppertree Park, Meadowood Residential Development, Gregory Canyon Landfill, Rosemary's Mountain - Palomar Aggregates Quarry, Palomar Community College–North Education Center, Campus Park (Passerelle) Multiple-Use Development, San Luis Rey River Park Master Plan, Liberty Quarry, Orange Grove Power Plant, and both extents of the SR-76 highway improvement project would all result in impacts to riparian habitats. The environmental evaluation for many cumulative projects has not been completed or was not available, and it can be assumed that additional

riparian community impacts would result from these projects. In addition, riparian habitat loss is occurring on a more regional basis as development takes place throughout the entire RSA.

Additionally, the USACE flood control project, located along 7.2 miles of the lower San Luis Rey River, in and around the City of Oceanside, consists of a double levee, 5.4 miles long; stone protected channel with a soft bottom; 1,330 feet of parapet walls at the ocean on the north and south levees; six interior drainage ponds; a five-mile bike trail and 247 acres of conservation lands. The Water Resources Development Act of 1996 reauthorized the project in 2006. Vegetation management is an ongoing part of the project, and includes arundo removal along much of the San Luis Rey River west of I-15.

These future projects in the RSA, viewed collectively, constitute a cumulative adverse impact to riparian communities. The contribution of the proposed project under either the Existing Alignment Alternative (Preferred Alternative) or Southern Alignment Alternative would result in a considerable contribution to cumulative impacts prior to mitigation. Mitigation is discussed below in Section 3.29.4. Avoidance and minimization measures have been incorporated into the project and are detailed in Section 3.20.3.

Wetlands and Other Waters

The proposed project is located within the Lower San Luis Rey (903.1) hydrologic unit of the San Luis Rey River watershed. As discussed under Hydrology and Floodplains above, the San Luis Rey River is largely channelized downstream as it flows through Oceanside. It has undergone relatively little channelization upstream from Melrose Drive. For this reason, the RSA for cumulative analysis of wetlands and other waters includes the river and adjacent wetlands from approximately Melrose Drive, located west of the western project terminus, to areas upstream of the project area just east of I-15.

The proposed project would affect a 5.5-mile-long stretch of the San Luis Rey River. As detailed in Section 3.21, riparian and wetland areas surrounding the project are associated with the San Luis Rey River, Live Oak Creek, and unnamed drainages that traverse the survey area, and, to a lesser extent, drainages and seeps from municipal storm water or sewer systems, irrigation, and roadway runoff. The Existing Alignment Alternative (Preferred Alternative) would result in 32.53 acres of direct permanent impacts to jurisdictional waters. The Southern Alignment Alternative would result in direct permanent impacts to 14.74 acres of jurisdictional waters.

Multiple projects cited in Table 3.29-1 would impact jurisdictional wetlands and waters when developed. Based on available information, more than 25 acres of jurisdictional waters and wetlands would be impacted by these projects. Approximations of impacts were not provided for all projects and the environmental analysis has not been completed for many of the projects. Implementation of the Southern Alignment Alternative would result in relinquishment of the existing SR-76 roadway to the County of San Diego, which may upgrade the existing roadway to County roadway standards. Upgrading the existing roadway would result in 8.69 acres of additional direct impacts to jurisdictional wetlands and waters.

Additionally, the USACE flood control project, located along 7.2 miles of the lower San Luis Rey River, in and around the City of Oceanside, consists of a double levee, 5.4 miles long; stone protected channel with a soft bottom; 1,330 feet of parapet walls at the ocean on the north and south levees; six interior drainage ponds; a five-mile bike trail and 247 acres of conservation lands. The Water Resources Development Act of 1996 reauthorized the project in 2006.

Vegetation management is an ongoing part of the project and includes arundo removal along much of the San Luis Rey River west of I-15.

While the federal policy of "no net loss" would suggest that there would ultimately be no net loss in the acreage of wetlands within the RSA, there is no way to comprehensively assess the success of project-specific mitigation efforts in terms of either wetland acreage created or restoration of wetland function. The proposed project under either the Existing Alignment (Preferred Alternative) or Southern Alignment Alternative, prior to mitigation, would contribute to cumulative impacts. Avoidance and minimization measures have been incorporated into the project that was designed to offset any adverse biological effects related to jurisdiction waters and wetlands impacts. Therefore, after mitigation, the project impacts would not make a contribution to cumulative impacts. A comprehensive description of avoidance, minimization, and mitigation is included in Section 3.29.4. With the implementation of mitigation discussed in Section 3.29.4, impacts to wetlands and other waters would not be cumulatively considerable.

Animal Species

The San Luis Rey River originates in the Palomar and Hot Springs Mountains, as well as several other mountain ranges in the Cleveland National Forest along the western border of the Anza Borrego Desert State Park. It is approximately 60 miles in length from its headwaters to the Pacific Ocean. The San Luis Rey River receives flow from 242 tributaries - adding up to 759 miles of perennial and intermittent stream. Elevations on the main stem range from sea level to over 4,600 feet at the headwaters. A few of the tributaries' headwater areas extend above 5,000 feet. These tributaries' flows have been altered by human uses.

The San Luis Rey River Watershed's coastal sub-basin, in which the project area is located, includes the watershed area along the San Luis Rey River from its mouth at the Pacific Ocean northeast to River Mile 19 at Rice Canyon, approximately one mile east of Interstate 15. Stream elevations within the sub-basin range from sea level at the mouth of the San Luis Rey River to approximately 1,600 feet in the headwaters of the tributaries. While it is the third largest sub-basin of the San Luis Rey Basin at 102 square miles, it is also the most populated. Henshaw Dam and the Escondido Canal diversion dam are the primary hydrologic controls of the river.

As a result of population growth in the sub-basin, the river, its stream channel and the surrounding riparian area have been the most altered and managed area in the watershed. The channelization of the river, manipulation of riparian vegetation, draining and downsizing the estuary, and utilizing numerous wells throughout the sub-basin have cumulatively changed the form, function, and habitat of the river. The proposed project is located in the San Luis Rey River Valley. Within the study corridor, the landscape remains largely rural and agricultural. The eastern area is more rural, while the west is more urbanized. There are large areas of open space throughout the project area, although some of this open area has been disturbed by agricultural use and no longer supports native habitat.

The RSA for analysis of animal species encompasses all of the projects included in the cumulative project list. Consideration of species and their habitats cannot be restricted by jurisdictional or political boundaries.

Numerous special-status wildlife species are known to occur or have potential to occur within the RSA.

With either proposed alignment alternative, direct, indirect, permanent, and temporary impacts would occur to suitable habitat that supports special-status wildlife species. Both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative would result in direct and indirect impacts to special-status species from the permanent loss of species individuals during construction activities; temporary increase in erosion, sedimentation, and pollution runoff; and the temporary or permanent loss of habitat necessary to support these species, both during construction activities and after the expansion and realignment of the highway, respectively. Permanent and temporary indirect impacts, including habitat fragmentation, increased noise levels, human intrusion, and night time lighting would be greater with the Southern Alignment Alternative. Permanent indirect impacts resulting from the Southern Alignment Alternative would be twice that of the Existing Alignment Alternative (Preferred Alternative).

For the proposed project, individual animal species would be substantially and adversely impacted by project implementation. As discussed in Section 3.29.4, avoidance, minimization, or mitigation measures that could reduce impacts to animal species include pre-construction nesting bird surveys, grading and vegetation clearing outside of the bird breeding season, and minimizing noise and lighting impacts during construction. The cumulative projects listed in Table 3.29-1 would be subject to the requirements of the MSCP, the Draft NCMSCP, and local biological and resource protection ordinances and implement 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. As such, with the implementation of mitigation discussed in Section 3.29.4, impacts to animals species would not be cumulatively considerable.

Threatened and Endangered Species

Similar to animal species, the RSA for analysis of threatened and endangered species encompasses all of the projects included in the cumulative project list. Consideration of species and their habitats cannot be restricted by jurisdictional or political boundaries.

The Federal Endangered Species Act defines direct (both permanent and temporary) effects as those effects occurring during action implementation; indirect effects (both permanent and temporary) occur later in time. Cumulative effects include future state, private and nonfederal activities that are reasonably certain to occur within the action area. Impacts to threatened and endangered species are critically based on loss of their native habitat. Often, decline of sensitive species is not due to the direct take of a species but, rather, from the loss of their habitat. Development throughout the region over time has reduced the amount of native vegetation communities in the region and, in turn, has impacted certain plant and wildlife species, increasing their rarity and, in some cases, threatening them with extinction. The effects of this increased urban development have been felt within the San Luis Rey River Valley, although less than in much of San Diego County, as development in the valley has historically been less extensive and intensive.

The regional threat to native species listed as threatened or endangered has resulted in Countywide habitat conservation efforts. The San Diego County MSCP was developed as a regional plan to provide for the long-term preservation of sensitive plant and animal species and natural vegetation in San Diego County, as discussed above under “Natural Communities.”

As described in Section 3.24.3, biological surveys for the proposed project found San Diego ambrosia, federally listed as endangered, present with the study area, predominantly north of

the existing SR-76 roadway. A small portion of two San Diego ambrosia populations overlap with the Existing Alignment Alternative (Preferred Alternative) footprint. Construction of the Existing Alignment Alternative (Preferred Alternative) would result in direct permanent impacts to less than 0.01 acre of occupied San Diego ambrosia habitat. No detected populations of San Diego ambrosia have been identified within the Southern Alignment Alternative footprint.

Based on available environmental analysis, two other cumulative projects in the RSA have potential impacts to San Diego ambrosia. The San Luis Rey Park Master Plan Programmatic Environmental Impact Report (PEIR) found potentially significant impacts to San Diego ambrosia. The SR-76 Melrose Drive to South Mission Road Highway Improvement Project found indirect impacts to San Diego ambrosia.

Impacts to four federally listed wildlife species are anticipated as a result of either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative (Section 3.24.3). These species are the arroyo toad, southwestern willow flycatcher, least Bell's vireo, and coastal California gnatcatcher. The arroyo toad is listed as federally endangered by USFWS and is a state species of special concern. Both the southwestern willow flycatcher and least Bell's vireo are federally listed and state-listed as endangered. The coastal California gnatcatcher is listed as federally threatened. Temporary indirect impacts during construction and permanent indirect impacts during operations to these four species could result from implementation of either project alternative. Direct impacts are anticipated for both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative to federally designated critical habitat for four federally listed wildlife species—the southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, and arroyo toad.

Based on available environmental analysis, other cumulative projects in the RSA have the potential to impact these four threatened and endangered species, along with other listed species. The Meadowood Residential Development would have potential impacts to coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher habitat. The Gregory Canyon Landfill would have potential impacts to habitat and breeding areas for arroyo toad, least Bell's vireo, southwestern willow flycatcher, and golden eagle. The Rosemary's Mountain - Palomar Aggregates Quarry environmental analysis found potential impacts to least Bell's vireo and southwestern willow flycatcher due to habitat loss. The Pala Mesa Highlands project would disturb coastal California gnatcatcher habitat. The Palomar Community College–North Education Center would have potential impacts to coastal California gnatcatcher, least Bell's vireo and southwestern willow flycatcher due to habitat disturbance during breeding seasons. The Campus Park (Passerelle) Multiple-Use Development and SR-76 I-5 to Melrose Drive Improvement projects would impact coastal California gnatcatcher and least Bell's vireo habitats. The San Luis Rey Park Master Plan PEIR found potentially significant impacts to 29 sensitive wildlife species, including southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, arroyo toad, Stephen's kangaroo rat, and San Diego ambrosia. Environmental analysis for the SR-76 Melrose Drive to South Mission Road Highway Improvement Project found both permanent and temporary direct and indirect impacts to arroyo toad, southwestern willow flycatcher, coastal California gnatcatcher, least Bell's vireo, and San Diego ambrosia. The Orange Grove Power Plant Project found potential impacts to sensitive species including coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and arroyo toad. For other surrounding cumulative projects, although environmental review is still underway, it is likely that these projects would also impact threatened and endangered species.

Planned development in the RSA is expected to result in direct impacts to, and in substantial loss of habitat for, threatened and endangered species. For this reason, the potential impacts to threatened and endangered plant and animal species from both the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative would be cumulatively considerable prior to implementation of the mitigation measures outlined in Section 3.29.4.

CEQA Determination

Under CEQA, the Existing Alignment Alternative (Preferred Alternative) would have a cumulatively considerable contribution to impacts associated with community character and cohesion, visual and aesthetics, cultural resources, hydrology and floodplains, paleontology, hazardous waste and materials, natural communities, wetlands and other waters, animal species, and threatened and endangered species. However, with the implementation of mitigation measures discussed in Section 3.29.4, all of these resources would not result in cumulatively considerable impacts.

The Southern Alignment Alternative would have a cumulatively considerable contribution to impacts associated with land use, growth, community cohesion and character, relocations and real property acquisitions, visual and aesthetics, hydrology and floodplains, paleontology, hazardous waste and materials, natural communities, wetlands and other waters, animal species, and threatened and endangered species. However, with the implementation of mitigation discussed in Section 3.29.4, impacts to visual and aesthetics, hydrology and floodplains, paleontology, hazardous waste and materials, natural communities, wetlands and other waters, animal species, and threatened and endangered species would not be cumulatively considerable. Impacts associated with land use, growth, community character and cohesion, and relocations and real property acquisitions would result in unmitigable changes to the rural character of the project area.

3.29.4 Avoidance, Minimization, and/or Mitigation Measures

Land Use

Southern Alignment Alternative

Because the Southern Alignment Alternative would contribute to changing patterns of land use in the project area, this alternative would contribute to substantial cumulative changes. Mitigation for any improvement of this Southern Alignment Alternative capable of carrying forecast traffic volumes would involve constructing a wider, realigned roadway. Given that requirement, mitigation for impacts to existing and planned land uses associated with the Southern Alignment Alternative would be infeasible. This unmitigable change to the rural character along the Southern Alignment Alternative would be a cumulatively considerable contribution to the substantial land use changes in the RSA.

Growth

Southern Alignment Alternative

The Southern Alignment Alternative would contribute to the construction of a new roadway and thus, would contribute to substantial cumulative changes. Implementation of the Southern Alignment Alternative could reduce the cost of development along the proposed alignment by

introducing a new roadway. The potential relocation of Vessels Stallion Farm and the introduction of a new roadway in an undeveloped, rural area would increase access to the area and increase the likelihood that land designated for preservation in the Draft NCMSCP could be developed. This potential change in the rural character along the Southern Alignment Alternative would be cumulatively considerable.

Community Character and Cohesion

Existing Alignment Alternative (Preferred Alternative)

Caltrans has conducted extensive community outreach and would continue to work with the community throughout the planning process and construction to minimize impacts to community character and cohesion. The Existing Alignment Alternative (Preferred Alternative) was designed with input from the community to avoid unnecessary impacts to community character and cohesion. Caltrans conducted and participated in a number of community outreach meetings and events since 2001 in a comprehensive effort to gather input and comments from the surrounding communities and stakeholders.

In addition to community outreach, design iterations of the Existing Alignment Alternative (Preferred Alternative) have effectively minimized impacts to homes, businesses, and visual resources; reduced the amount of necessary excavation along the corridor; and increased public safety. Therefore, impacts to community character and cohesion associated with the Existing Alignment Alternative (preferred Alternative) would not be cumulatively considerable. For both Alignment Alternatives, there is an overlap with visual quality with respect to impacts to the rural character of the area, and the Visual/Aesthetics measures (see Section 3.11) would help to minimize and mitigate impacts.

The Morrison and Groves mitigation parcels from the SR-76 Melrose to South Mission project, the Vessels, Rincon, Tabata and Lilac Ranch parcels have been purchased for biological mitigation and are proposed for restoration and preservation from future development. The Tabata parcel was previously used as farmland. The Stacco, Time Out Holdings and Jeffries Ranch parcels have been purchased to comply with "net benefit" of the TransNet Ordinance, and would remain undeveloped. Morrison, Groves, Vessels, Rincon and Tabata, which include areas of farmland, are within the outline of the proposed county park and it has been proposed that those parcels become part of the park owned by the County of San Diego. In order to minimize impacts to residential areas along the northern edge of SR-76, some curve corrections have been re-designed to shift south slightly, which would leave portions of the old roadway pavement to be removed and those areas revegetated thereby minimizing the adverse impacts to farmland from the proposed project. During the right-of-way process, efforts would be made to add agricultural easements to the sales of these remnant farmland parcels or excess lands such as may be created at these areas of curve corrections, if any. These efforts may also maintain community character and cohesion since including larger mitigation parcels in areas designated for preservation would prevent future unplanned commercial or other development within the rural area of Bonsall and Fallbrook.Southern Alignment Alternative

The Southern Alignment Alternative was developed in conjunction with the community outreach efforts, design considerations, and design iteration process described above. However, no mitigation is feasible for the impacts associated with introducing a new transportation corridor into a largely undeveloped area and potentially displacing Vessels Stallion Farm. Therefore, impacts to community character and cohesion associated with the Southern Alignment Alternative would be cumulatively considerable.

Relocations and Real Property Acquisitions

Southern Alignment Alternative

Design considerations were incorporated into development of the Southern Alignment Alternative to avoid existing community facilities, businesses, and neighborhoods, thereby minimizing the number of necessary relocations. Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. However, the potential relocation of Vessels Stallion Farm and other associated urban features in an undeveloped rural area could potentially influence the future development of agricultural land south of the San Luis Rey River. Therefore, impacts to relocations would result in a cumulatively considerable loss of the rural character of the project area and region.

Visual/Aesthetics

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The proposed project, regardless of the alternative selected, along with additional transportation projects and other development in the area would contribute to the cumulative reduction in overall visual quality and character of this area. The primary visual mitigation concept for the project is to integrate the highway into the natural landscape. This includes carefully selecting plant materials, creating natural-appearing landforms, retaining natural features, and designing and selecting roadway elements that maintain the rural character of the project area. Successful implementation of the recommended visual mitigation measures (see Section 3.11, Visual/Aesthetics) would offset cumulative effects. With the implementation of these mitigation measures, visual and aesthetic impacts would not be cumulatively considerable.

Cultural Resources

Existing Alignment Alternative (Preferred Alternative)

To avoid impacts to cultural resources, a monitoring plan, ESA action plan/AMA plan, and Post-Review Discovery Plan or combination of these plans would be developed prior to construction. These plans would outline when and how monitoring would occur, and outline notification, discovery, and treatment of cultural resources procedures, including coordination, timeframes, scheduling, compensation, responsibilities, and treatment of new discoveries. Construction of the proposed project would avoid the prehistoric archaeological sites through the ESA action plan which includes archaeological and Native American monitoring. A geomorphological assessment of the project footprint identified certain areas as having a “high sensitivity” for potential buried deposits. These locations would be monitored during construction to prevent the accidental destruction of buried cultural deposits. Additional measures have been provided regarding discovery of cultural materials during earth-moving activities. Compliance with Caltrans guidelines and implementation of these mitigation measures would not result in cumulatively considerable impacts to cultural resources.

Hydrology and Floodplain

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

As a means of offsetting potential floodplain impacts, standard engineering practices would be used, where feasible, to facilitate drainage. These measures and specifications for each encroachment are fully described in Section 3.13.4. With the implementation of these mitigation measures, floodplain impacts would not be cumulatively considerable.

Paleontology

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The proposed project would result in impacts to deposits that were been assigned a major paleontological resource sensitivity (i.e., Pleistocene older alluvial deposits). A Paleontological Mitigation Plan (PMP) would be formulated to reduce the proposed impacts and would include consultation and retention of a qualified paleontological monitor on a full-time basis during the original cutting of previously undisturbed deposits of high sensitivity to inspect exposures for contained fossils. Additional measures complying with Caltrans guidelines have been provided regarding the discovery of fossils during ground-disturbing activities. Compliance with Caltrans guidelines and implementation of these mitigation measures would not result in cumulatively considerable impacts to paleontological resources.

Hazardous Waste/Materials

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

Prior to construction, hazardous waste studies would be conducted to screen and mitigate for potential soil and groundwater contamination, asbestos or lead-paint exposure, and presence of pesticides or herbicides in the surface soils. In compliance with Caltrans guidelines, a site-specific Health and Safety Plan and Excavation/Remediation Plan would be required. These measures are fully described in Section 3.17.4. With the implementation of these mitigation measures, impacts to hazardous waste and materials would not be cumulatively considerable.

Natural Communities

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The proposed project was designed to avoid and minimize impacts to wetlands and riparian communities wherever possible. Design iterations developed during the environmental analysis and preliminary engineering phase of the proposed project resulted in alignment shifts to further reduce impacts to sensitive riparian communities.

Environmental consequences of the project on riparian communities would be avoided and reduced to the extent feasible through ongoing project design. Recommendations regarding possible compensatory mitigation of impacts to riparian and wetland vegetation communities and cover types, including jurisdictional waters of the U.S., are further detailed in Section 3.21, Wetlands and Other Waters. Final mitigation for impacts would be determined through consultation with the resource agencies. Mitigation of impacts due to construction of the proposed roadway improvements could also include invasive species removal, as discussed in Section 3.25, Invasive Species.

Additional measures to further avoid and reduce impacts to these sensitive resources would be incorporated into project implementation via responsible preconstruction planning and construction activities. Such measures would include preconstruction meetings, contractor awareness programs, temporary fencing and signage for all sensitive resource areas immediately adjacent to the proposed project footprint, the presence of biological monitors during construction activities adjacent to riparian communities and wetlands, and the implementation of and strict adherence to standard BMPs. Mitigation for impacts would be designed to conform to a "no net loss" policy for riparian communities and thereby avoid permanent cumulative impacts. With the implementation of these mitigation measures, impacts to natural communities would not be cumulatively considerable.

Wetlands and Other Waters

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternatives

The following are recommendations regarding possible compensatory mitigation of impacts to riparian and wetland vegetation communities, including jurisdictional waters of the U.S. These mitigation measures are further described in Section 3.21.4.

Mitigation for project impacts could occur in the form of wetland creation/restoration (that results in a net increase in wetland acreage), or creation/restoration combined with enhancement; however, the mitigation could not result in a net loss of wetland habitat or wetland functions and values. Therefore, a minimum 1:1 creation/restoration ratio would be applied toward any impacts to jurisdictional wetlands. Impacts to jurisdictional waters would be mitigated at ratios determined in consultation with the appropriate resource agencies.

The development of a conceptual mitigation, maintenance, and monitoring plan would be required for the wetland mitigation by both federal and state wetland permits. This plan would include details regarding site preparation (e.g., grading), planting specifications, and irrigation design, as well as maintenance and monitoring procedures. The plan would outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria. Any wetland mitigation that cannot be achieved through on-site creation/restoration and enhancement would be performed off-site, typically per agency guidance, within the same hydrologic unit (watershed) where impacts occur. Alternatively, the mitigation obligations may also be satisfied by participating in a fee-based mitigation program through a wetland mitigation bank. In either case, mitigation would be designed to conform to a "no net loss" policy for riparian communities, avoiding permanent cumulative impacts. With the implementation of these mitigation measures, impacts to wetlands and other waters would not be cumulatively considerable.

Animal Species

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

Avoidance, minimization, and mitigation measures for the sensitive wildlife species would be largely habitat based and would include those habitat-based measures outlined in Sections 3.20, Natural Communities, 3.21, Wetlands and Other Waters, and 3.22, Plant Species. Mitigation for impacts to species habitats would be met through the proposed mitigation measures for Diegan coastal sage scrub, riparian, and wetland vegetation. Avoidance and mitigation measures for impacts to all sensitive species and migratory birds include installing noise walls and light glare shields, fencing off known species populations, and limiting

construction activities outside of the bird breeding and nesting season. Specific mitigation measures to threatened and endangered species are discussed below. As a result of the mitigation measures provided, cumulatively considerable impacts related to animal species would not occur.

Threatened and Endangered Species

Existing Alignment Alternative (Preferred Alternative) and Southern Alignment Alternative

The contribution of the proposed project, regardless of which alternative is selected, would be cumulatively considerable prior to mitigation. Avoidance, minimization, and mitigation measures for the threatened and endangered plant and animal species discussed in this section would be largely habitat-based and would include those measures outlined in Sections 3.20, Natural Communities, and 3.21, Wetlands and Other Waters. Avoidance, minimization, and mitigation measures specific to threatened and endangered species are summarized below and further described in Section 3.24.4. Impacts to habitat would be mitigated at ratios determined in consultation with the appropriate resource agencies. With the implementation of these mitigation measures, impacts to threatened and endangered species would not be cumulatively considerable.

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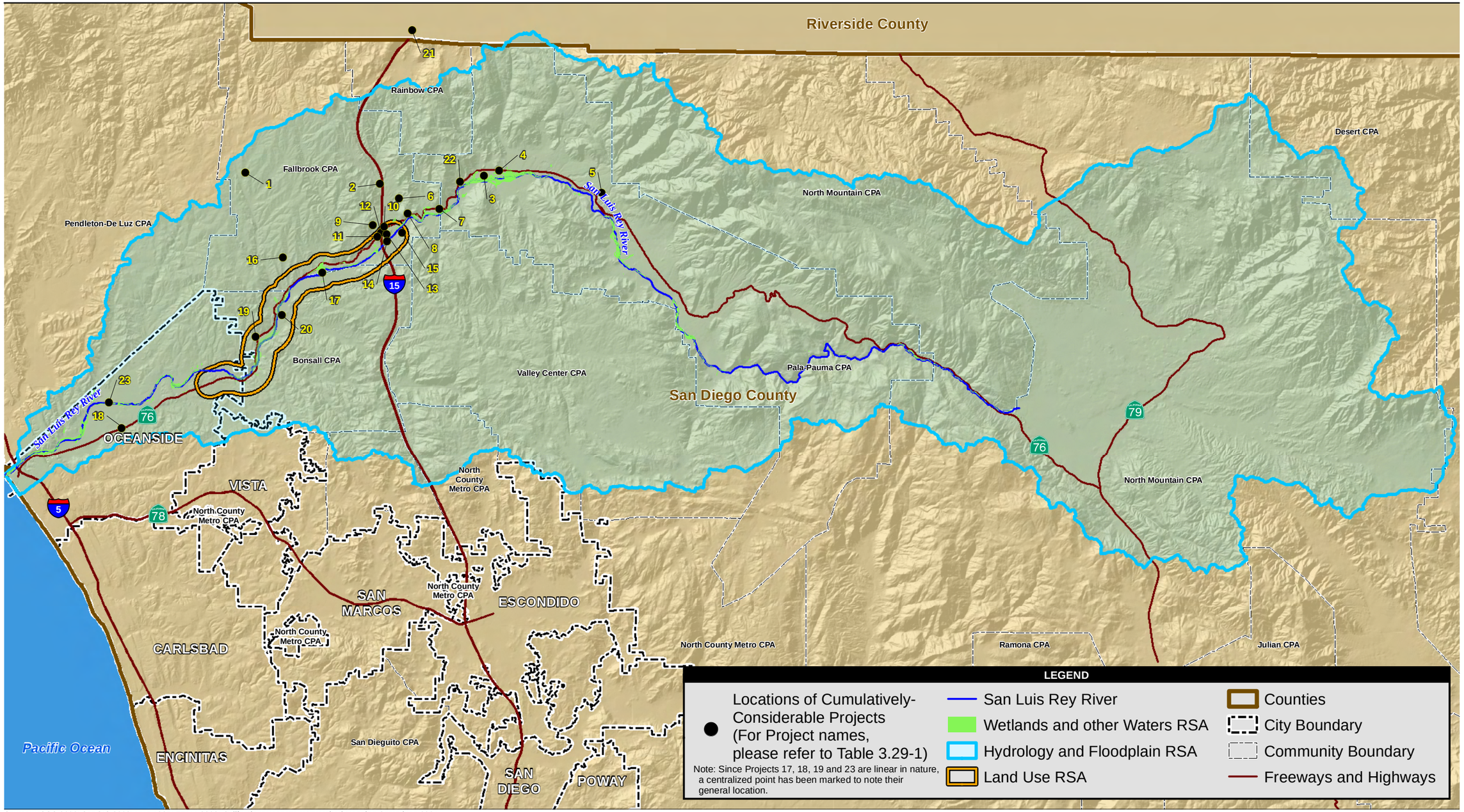

Source: USGS 2000; SanGIS 2009; NWI 1985; FEMA 2002; California Interagency Watershed Mapping Committee 2004

3.5 1.75 0 3.5 Miles

Scale: 1 = 221,760; 1 inch = 3.5 miles

Figure 3.29-1
Locations of Cumulatively-Considerable Projects and Resource Study Areas (RSA)

Path: P:\2008\08080105 SR76 East S.Mission I-15 PA-ED\5GIS\MXD\EIR_EIS\October 2011\fig 3_29_1 EIS_EIR_CumulativeProjects_RSA_all.mxd, 10/11/2011, augellop

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CHAPTER 4
CALIFORNIA ENVIRONMENTAL QUALITY ACT (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. FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327. Caltrans is the lead agency under CEQA and 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.

4.2 DISCUSSION OF SIGNIFICANCE OF IMPACTS

4.2.1 Less-than-Significant Effects of the Proposed Project

This section lists the resources that would have a less-than-significant impact from implementation of each project alternative. As part of the scoping and environmental analysis conducted for the proposed project, the following environmental issues were considered, but no significant impacts were identified. Refer to the various sections identified below for the analysis of project impacts.

Existing Alignment Alternative (Preferred Alternative)

- Land Use (Section 3.1)
- Consistency with State, Regional, and Local Plans and Programs (Section 3.2)
- Parks and Recreational Facilities (Section 3.3)
- Growth (Section 3.4)

- Farmlands (Section 3.5)
- Community Character and Cohesion (Section 3.6)
- Relocations and Real Property Acquisitions (Section 3.7)
- Environmental Justice (Section 3.8)
- Utilities/Emergency Services (Section 3.9)
- Traffic and Transportation/Pedestrian and Bicycle Facilities (Section 3.10)
- Water Quality and Storm Water Runoff (Section 3.14)
- Geology/Soils/Seismic/Topography (Section 3.15)
- Air Quality (Section 3.18)
- Noise (Section 3.19)
- Plant Species (Section 3.22)
- Invasive Species (Section 3.25)
- Energy (Section 3.26)

Southern Alignment Alternative

- Consistency with State, Regional, and Local Plans and Programs (Section 3.2)
- Parks and Recreational Facilities (Section 3.3)
- Farmlands (Section 3.5)
- Environmental Justice (Section 3.8)
- Utilities/Emergency Services (Section 3.9)
- Traffic and Transportation/Pedestrian and Bicycle Facilities (Section 3.10Water Quality and Storm Water Runoff (Section 3.14)
- Geology/Soils/Seismic/Topography (Section 3.15
- Air Quality (Section 3.18)
- Noise (Section 3.19)
- Plant Species (3.22)
- Invasive Species (Section 3.25)
- Energy (Section 3.26)

When determining whether a noise impact is significant under CEQA, compare the baseline noise level and the build noise level. The CEQA noise analysis is completely independent of the NEPA-23 CFR 772 analysis discussed in Chapter 3, which is centered on noise abatement criteria.

Under CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected and the absolute noise level.

Noise impacts are presented in Section 3.19, where Table 3.19-5 shows the existing traffic noise levels and predicted noise levels for the Existing Alignment Alternative (Preferred Alternative) and the Southern Alignment Alternative. The proposed build alternatives would increase noise levels from 2 to 6 dBA in most locations. A 3 decibel difference is considered the minimal difference that the human ear can readily perceive; differences less than 3 dBA are generally not perceived. Therefore, under CEQA, no significant impact would occur as a result of the proposed project and no mitigation is required. However, under NEPA-23 CFR 772, because the noise levels at this receptor already approaches or exceeds the noise abatement criteria of 67 dBA, noise abatement would need to be considered.

4.2.2 Less-than-Significant Environmental Effects After Mitigation and/or Minimization

This section lists the environmental resources that are determined to be significantly affected by implementation of the proposed project, but would be considered less than significant with the proposed mitigation and/or minimization outlined in Chapter 3 of this document.

Existing Alignment Alternative (Preferred Alternative)

- Community Character and Cohesion (Section 3.6)
- Visual/Aesthetics (Section 3.11)
- Cultural Resources (Section 3.12)
- Hydrology and Floodplain (Section 3.13)
- Paleontological Resources (Section 3.16)
- Hazardous Waste/Materials (Section 3.17)
- Natural Communities (Section 3.20)
- Wetlands and Waters (Section 3.21)
- Animal Species (Section 3.23)
- Threatened and Endangered Species (Section 3.24)

Southern Alignment Alternative

- Visual/Aesthetics (Section 3.11)
- Cultural Resources (Section 3.12)
- Hydrology and Floodplain (Section 3.13)
- Paleontological Resources (Section 3.16)
- Hazardous Waste/Materials (Section 3.17)
- Natural Communities (Section 3.20)
- Wetlands and Waters (Section 3.21)
- Animal Species (Section 3.23)
- Threatened and Endangered Species (Section 3.24)

4.2.3 Unavoidable Significant Environmental Effects

This section is used to list those environmental effects that would remain significant even after mitigation measures are taken. More detailed analysis can be found in the respective sections within Chapter 3 of this document.

Land Use (Section 3.1). For a full discussion, refer to Section 3.1, Land Use.

***Southern Alignment Alternative*.** The Southern Alignment Alternative would result in one full property acquisition and multiple partial property acquisitions. The Southern Alignment Alternative would result in displacement of Vessels Stallion Farm. While large portions of Vessels Stallion Farm could remain in agricultural production, introduction of this new roadway would convert agricultural and undeveloped land to roadway uses. Conversion of these land uses within a largely undeveloped area would represent a significant change to the existing land use pattern.

The Southern Alignment Alternative would introduce a new roadway into an undeveloped area and would have impacts to both existing and planned land uses. Mitigation for impacts to existing land uses would be infeasible and remain significant.

Relocations (Section 3.7). For a full discussion, refer to Section 3.7, Relocations and Real Property Acquisitions. Under CEQA, a project may be considered to have a significant environmental effect if it results in displacement of a substantial number of people.

Southern Alignment Alternative. Implementation of the Southern Alignment Alternative would result in the displacement of Vessels Stallion Farm. This would result in the displacement of an estimated 30 to 50 employees. Because Vessels Stallion Farm is located on agricultural land in cultivation, all facilities associated with Vessels Stallion Farm would have to be relocated, reconstructed, or recultivated on one similarly large continuous property zoned for agricultural uses. Relocation would negatively affect the Vessels Stallion Farm business, which is dependent on proximity to the horse racing circuits using the Del Mar Race Track in San Diego County and the Los Alamitos Race Track in Orange County. In addition to the permanent impacts, the Southern Alignment Alternative would result in right-of-way acquisitions on a parcel that contains a roadside fruit stand and another parcel occupied by Faubus Farms.

Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees would be entitled to moving expenses. However, as discussed above, with the Southern Alignment Alternative, it cannot be concluded that adequate relocation resources exist for Vessels Stallion Farm. Therefore, relocation impacts associated with the Southern Alignment Alternative would remain unmitigable.

Growth (Section 3.4). For a full discussion, please refer to Section 3.4, Growth. Under CEQA, a project may be considered to have a significant environmental effect if it would influence substantial population growth. Growth within the project area and in southwest Riverside County would most likely occur without the proposed project or either project alternative. Growth is anticipated in regional plans and projections and is considered an indirect issue related to the proposed project, some of which would not be minimized through alternate project features or design. Most of these growth influence impacts are unavoidable.

Southern Alignment Alternative. Implementation of the Southern Alignment Alternative could reduce the cost of development along the proposed alignment by introducing a new roadway and other associated urban features into an undeveloped rural area. Introduction of this new roadway would increase access to the area and increase the likelihood that land designated for preservation in the Draft NCMSCP could be developed. Mitigation for growth-related impacts would be infeasible and impacts would be significant.

Community Character and Cohesion (Section 3.6). For a full discussion, refer to Section 3.6, Community Character and Cohesion. Under CEQA, 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. The proposed project would result in physical change to the environment. As such, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Southern Alignment Alternative. Implementation of the Southern Alignment Alternative would result in the displacement of Vessels Stallion Farm, a business that is representative of the rural

character of the community. Displacement of Vessels Stallion Farm may cause future development along the southern edge of the San Luis Rey River Valley, which could further degrade the rural character of the surrounding community. Furthermore, implementation of the Southern Alignment Alternative would reduce the visual quality of the community by constructing a new transportation corridor in a largely undeveloped area. However, no mitigation is feasible for the impacts associated with introducing a new transportation corridor into a largely undeveloped area and potentially displacing Vessels Stallion Farm. Therefore, impacts to community character and cohesion associated with the Southern Alignment Alternative would remain significant.

No mitigation is feasible for the impacts associated with introducing a new transportation corridor into a largely undeveloped area. Therefore, impacts to community character and cohesion associated with the Southern Alignment Alternative would be significant.

Southern Alignment Alternative. The Southern Alignment Alternative would noticeably compromise the character and scale of the area by introducing a new transportation corridor, coupled with new bridges, guardrails, drainage structures, and other associated construction components, into a largely undeveloped area. These impacts, combined with extensive landform modification and vegetation removal, would result in substantially reduced visual quality and character. Additionally, the Southern Alignment Alternative would require new bridges spanning the river in two locations, which would have a pronounced negative impact on the integrity of the existing mature riparian vegetation along the riverbed and the open river valley. Although implementation of the mitigation measures described in Section 3.11 would reduce impacts associated with the Southern Alignment Alternative, impacts would remain due to the introduction of a new roadway into an undeveloped, rural area. Therefore, mitigation for visual impacts associated with the Southern Alignment Alternative would be infeasible and remain significant.

Visual/Aethetics (Section 3.11). For a full discussion, refer to Section 3.11, Visual/Aesthetics.

The Southern Alignment Alternative would noticeably compromise the character and scale of the area by introducing a new transportation corridor, coupled with new bridges, guardrails, drainage structures, and other associated construction components, into a largely undeveloped area. These impacts, combined with extensive landform modifications and vegetation removal, would result in substantially reduced visual quality and character. Additionally, the Southern Alignment Alternative would require new bridges spanning the river in two locations, which would have a pronounced negative impact on the integrity of the existing mature riparian vegetation along the riverbed and the open river valley. Although implementation of the mitigation measures described in Section 3.11 would reduce impacts associated with the Southern Alignment Alternative, impacts would remain due to the introduction of a new roadway into an undeveloped, rural area. Therefore, visual impacts associated with the Southern Alignment Alternaive would be substantial.

4.2.4 Significant Irreversible Environmental Changes

Uses of any nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and secondary impacts generally commit future generations to similar uses. Also, environmental damage could result from environmental accidents associated with the project. The following resources would be converted: wetlands, farmlands, homes, floodplain, and visual.

4.2.5 Climate Change

Regulatory Setting

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gases (GHGs), particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization's in 1988, has led to increased efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs 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).

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas (GHG) Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts due to climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).[2]

Transportation sources (passenger cars, light duty trucks, other trucks, buses and motorcycles) in the state of California make up the largest source (second to electricity generation) of greenhouse gas emitting sources. Conversely, the main source of GHG emissions in the United States (U.S.) is electricity generation followed by transportation. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improve system and operation efficiencies; 2) reduce growth of vehicle miles traveled (VMT); 3) transition to lower GHG fuels; and 4) improve vehicle technologies. To be most effective all four should be pursued collectively. The following regulatory setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

State

With the passage of several pieces of legislation including State Senate and Assembly Bills and Executive Orders, California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases (AB 1493), 2002: requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the United States Environmental Protection Agency (USEPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with

[2] http://climatechange.transportation.org/ghg_mitigation/

model year 2009. California agencies will be working with Federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order S-3-05: (signed on June 1, 2005, by Governor Arnold Schwarzenegger) 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.

AB32 (AB 32), the Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the State's Climate Action Team.

Executive Order S-01-07: Governor 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 ten percent by 2020.

Senate Bill 97 (Chapter 185, 2007): required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State California Environmental Quality Act (CEQA) Guidelines for addressing greenhouse gas emissions. The Amendments became effective on March 18, 2010.

Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are , no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and Executive Order 13514-*Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the interagency Climate Change Adaptation Task Force, which is engaged in developing a U.S. strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the USEPA has the authority to regulate GHG. The Court held that the USEPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (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 found 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.[3] 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.

USEPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a memorandum on May 21, 2010.[4]

The final combined USEPA and NHTSA 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. The standards 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 GHG 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).

On January 24, 2011, the USEPA along with the U.S. Department of Transportation and the State of California announced a single timeframe for proposing fuel economy and greenhouse gas standards for model years 2017-2025 cars and light-trucks. Proposing the new standards in the same timeframe (September 1, 2011) signals continued collaboration that could lead to an extension of the current National Clean Car Program.

Project Analysis

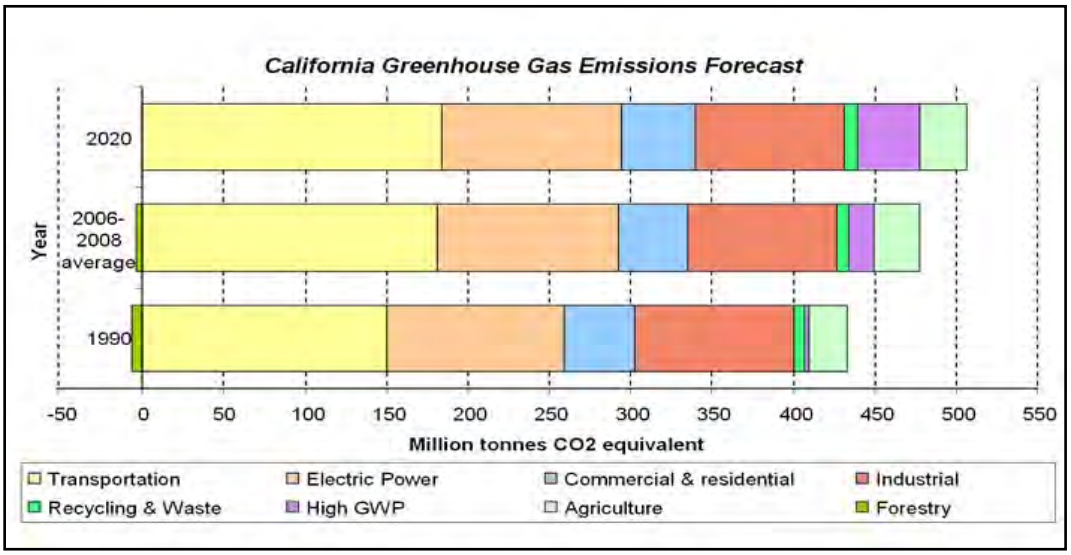
An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG.[5] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(h)(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

[3] http://www.epa.gov/climatechange/endangerment.html.
[4] http://epa.gov/otaq/climate/regulations.htm.
[5] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the SCAQMD (Chapter 6: : The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

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.

The AB 32 Scoping Plan contains the main strategies California will use to reduce GHG. As part of its supporting documentation for the Draft Scoping Plan, CARB released the GHG inventory for California (Forecast last updated: 28 October 2010) (Figure 4.7-1). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 4.7-1. California Greenhouse Gas Forecast



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, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006 (see Climate Action Program at Caltrans (December 2006).[6]

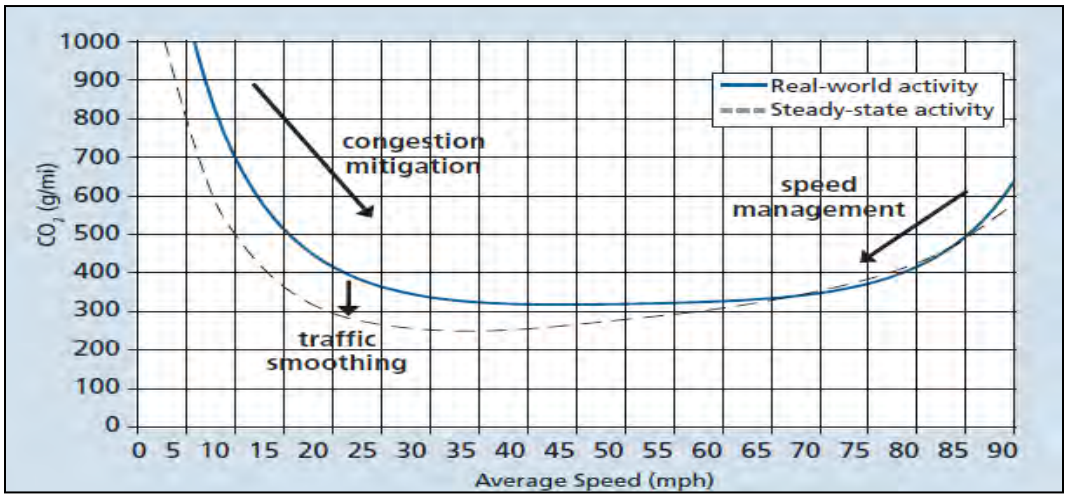
One of the main strategies in Caltran's Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (Figure 4.7-2). 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 SR-76 highway improvement project proposes two alignment alternatives, an Existing Alignment Alternative and a Southern Alignment Alternative. SR-76 is currently a two-lane

[6] Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf.

conventional highway with signalized and unsignalized at-grade intersections. The project proposes to widen the SR-76 roadway to a four-lane conventional highway to improve the movement of people and goods throughout the corridor, thereby reducing congestion and travel delays.

Figure 4.7-2. Possible Effect of Traffic Operation Strategies in Reducing On-road CO_2 Emission[1]



[1] Traffic Congestion and Greenhouse Gases: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May-June 2010), http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf.

The project also proposes to expand the existing Park and Ride facility at the northwestern corner of the SR-76/I-15 interchange, bound by I-15, SR-76, and Old Highway 395. An area south of SR-76, between Old Highway 395 and the southbound I-15 on-ramp, has been evaluated for environmental impacts in this document for potential future expansion of the Park and Ride within the Caltrans right-of-way, and approximately 600 feet north of the San Luis Rey River, which would supplement the existing Park and Ride facility located northwest of the SR-76/I-15 interchange. The Park and Ride facility is anticipated to support vanpools, carpools, truck parking, and casino shuttle services. The placement of the new Park and Ride facility could attract additional bus service, which is not currently provided on this portion of SR-76. Buses currently traverse South Mission Road to the west, and also provide service from the east to I-15 and then proceed south to Escondido, but there are no bus routes within the project area. The Park and Ride facility could potentially reduce the number of vehicles traveling on both SR-76 and I-15, which would in turn reduce congestion, fuel consumption, and GHG emissions.

Under the No Build Alternative, the two-lane conventional highway would remain the major transportation corridor in the area. However, no widening or other improvements would occur, and delays and travel times would continue to increase on SR-76. The additional traffic congestion could impact local streets and roads that feed onto SR-76, increasing idling times for turning movements. No reduction in fuel consumption or GHG emissions would result, as no new Park and Ride facility would be constructed. Under the No Build Alternative, traffic congestion and increased travel times would likely increase fuel consumption and GHG emissions in the SR-76 corridor.

This proposed project is included in the 2007 Federal Statewide Transportation Improvement Program (FSTIP) and is included in the SANDAG 2030 RTP/Pathways for the Future and the

2008 RTIP. The 2010 RTIP was adopted by the SANDAG Board September 24, 2010. On December 14, 2010 FHWA made a finding of conformity for the 2010 RTIP and a conformity redetermination for the 2030 RTP. The design concept and scope of the proposed project are consistent with the project description in the 2030 RTP, the 2010 RTIP, and the assumptions in SANDAG's regional emissions analysis. The 2050 RTP was adopted by the SANDAG Board on October 28, 2010 and the project is found on page 6-30 on the Revenue Constrained Plan.

To estimate the potential beneficial or negative effects of the proposed project on San Diego regional GHG levels, EMFAC-2007/BURDEN analysis performed by SANDAG and the ARB EMFAC 2007 vehicle emissions model for the SDAB were used to calculate carbon dioxide emissions for the San Diego metropolitan area with and without the proposed SR-76 highway improvement project.

To determine regional GHG emissions, the SANDAG "Revenue Constrained" Series 11, 2015 and 2030 regional travel demand models were used for the land use and local street network assumptions for the build and no build scenarios. Regional fuel consumption and CO_2 emissions were modeled with and without the build scenarios for each time horizon.

Regional fuel consumption estimates for the Existing Alignment Alternative incorporated travel along the improved SR-76 roadway, and regional fuel consumption for the Southern Alignment Alternative took into account both travel along the proposed new SR-76 Southern Alignment Alternative and the existing SR-76 roadway, which was assumed to continue to operate as a County-maintained local access road. The results of the regional fuel consumption and CO_2 emissions models are shown in Table 4-1.

Table 4-1. Average Difference in Regional CO_2 Emissions

Alternative	Model Year	Fuel Consumption (gallons)	Efficiency Fuel Savings (gallons per day)	Regional CO_2 Annual Average Emissions (tons per day)	Efficiency CO_2 Savings (tons per day)
Current SR-76 facility	2010	4,635,857		51,070	
No Build Alternative	2015	4,855,570	-	53,490	-
Existing Alternative	2015	4,854,520	1,050	53,470	20
Southern Alternative	2015	4,853,890	1,680	53,463	27
No Build Alternative	2030	5,514,710	-	60,280	-
Existing Alternative	2030	5,514,000	710	60,270	10
Southern Alternative	2030	5,478,190	36,520	59,980	300

Note: EMFAC2007 model reporting limit=10 tons per day

Compared to the No Build Alternative, implementation of either of the proposed build alternatives is expected to reduce CO_2 emissions for the future 2015 build year as well as for the future 2030 build year scenarios. The Existing Alignment Alternative is estimated to reduce 2030 CO_2 emissions in the San Diego region by up to 10 tons per day. In 2015, CO_2 emissions reductions are estimated to be 20 tons per day compared to the No Build Alternative. Implementation of the Southern Alignment Alternative is estimated to reduce 2030 CO_2 emissions in the San Diego region by 300 tons per day. In 2015, the CO_2 emissions reductions are estimated to be 27 tons per day with the Southern Alignment Alternative. Under the Southern Alignment Alternative scenario, the present SR-76 roadway would remain in use along with the newly constructed four-lane facility to the south. The projected GHG emissions reduction is expected to be related to the decreased congestion and improved travel times along the SR-76 corridor and the local street network. Therefore, despite the localized increase

in traffic levels along the SR-76 roadway expansion, regional transportation efficiency would be increased and overall CO_2 emissions would be reduced.

Currently, the emissions modeling software is limited to generating output only for freeway mainlines, and not local streets. Therefore, the above analysis does not reflect any reduction in GHG emissions that could result from reduced queue lengths at intersections. Because the proposed project would reduce delay along the SR-76 project corridor, there is the potential for further reduction 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 operation. 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, and 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 lasting 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.

It is Caltrans' goal to construct this proposed project in the least amount of time by planning and staging the work efficiently. The reduced construction time would lead to a low number of construction-related delays and make the benefits of the project available sooner. The proposed increased capacity and improved geometry would reduce travel times for motorists, which would provide for less vehicle operating time, reduce wear on the vehicles, and reduce fuel consumption and GHG emissions. Additional construction savings would result from fewer vehicle stops and starts, which is the most wasteful condition in terms of fuel.

Design goals are usually to balance the project's cut/fill to negate either a shortage of or excess material for the proposed project, which could eliminate unnecessary trucking of materials to or from the construction site. Caltrans has recently been identifying ways to incorporate a greener construction fleet (some construction equipment runs on compressed natural gas or E-85) and is developing construction specifications by which construction-related emissions would be reduced. Caltrans is also proposing several features that would reduce the long-term maintenance needs of the project, which would reduce the long-term use of fuel and other resources. These include such items as concrete median barriers, overhead video-based detection, and minimal light installation.

CEQA Conclusion

While there would be a slight increase in GHG emissions during construction, it is anticipated that any increase in GHG emissions due to construction would 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. These measures are outlined in the following section.

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as CARB works to implement the Executive Orders S-3-05 and S-01-07 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. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. 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 are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 4.7-3.

Figure 4.7-3. The Mobility Pyramid

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 USEPA and CARB.

Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the UC Davis.

Table 4-2 summarizes Caltrans and statewide efforts that it is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 4-2. Climate Change/CO_2 Reduction 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	.975	7.8
Operational Improvements & Intelligent Trans. System (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 B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5% limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	4.2 3.6
Goods Movement	Office of Goods Movement	CalEPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.66	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 would also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- The proposed project would be designed to minimize removal of existing trees, especially mature trees. The proposed project would overlap existing road surfaces or would remove existing pavement that is no longer needed and would revegetate those surfaces, thus helping to maintain the carbon sequestration potential of the project site.
- The proposed project would plant disturbed areas with a variety of native and drought-tolerant 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 containers to accelerate reestablishment of the GHG sink and to shade the pavement. In the short term, immature tree planting would probably not offset GHGs 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 overtime as the trees become more mature, except as counteracted by increased traffic volumes.
- Caltrans and the CHP are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS are 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.
- In addition, Caltrans and SANDAG provide ridesharing services and Park and Ride facilities to help manage the growth in demand for highway capacity. The project proposes to construct expansion of the Park and Ride facility to accommodate vanpools, carpools, truck parking, and casino shuttle services.
- 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 percent of the electricity of traditional incandescent lights, and ISL sign lighting fixtures consume less than half the power of traditional mercury vapor fixtures.
- According to Caltrans' Standard Specification Provisions, the contractor must comply with the Air Pollution Control District's rules, ordinances, and regulations in regard to air quality restrictions. This may include restrictions for lane closures to reduce idling time.

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
- Irrigation controllers including water conservation features and solar or battery power
- Restricted pesticide use and reduction goals

The State of California maintains several websites that 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, increased storm surges and intensity, and increased 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 would 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 adaptation involves 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 would help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order 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 [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 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 the following:

- Relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, and 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; and
- A discussion of future research needs regarding sea level rise for California.

Furthermore, Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess the vulnerability of transportation systems to sea level affecting safety, maintenance, and operational improvements of the system and the economy of the state. 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 are 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 through 2013, 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, and storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement).

The NOP for the proposed SR-76 South Mission Road to I-15 Highway Improvement Project was filed with the Governor's Office of Planning and Research on September 23, 2008. The applicable adopted transportation plans for the proposed project area the 2030 RTP adopted by SANDAG on November 30, 2007; and the 2010 RTIP adopted by SANDAG on September 24, 2010. USDOT made a finding of conformity for the 2030 Revenue Constrained RTP on December 10, 2007, and a finding of conformity for the 2010 RTIP on December 14, 2010. Therefore, the SR-76 South Mission Road to I-15 Highway Improvement Project NOP was filed and the proposed project was programmed in the 5-year window prior to 2013, so the project is not required to analyze sea-level rise according to the Resources Agency planning guidelines.

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 Schwarzenegger's Executive Order 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, the 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 Resources Agency, numerous other state agencies were involved in the creation of the discussion draft, including Environmental Protection; 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 Governor Schwarzenegger's November 2008 Executive Order S-13-08 that specifically asked the 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.

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 would be able to review its current design standards to

determine what changes, if any, may be warranted to protect the transportation system from sea level rise.

4.3 MITIGATION MEASURES FOR SIGNIFICANT IMPACTS UNDER CEQA

Supporting documentation of all CEQA resource evaluation is provided in Chapter 3 of this Final EIR/EIS. Discussion of all impacts avoidance, minimization and/or compensation measures is under the appropriate topic headings in Chapter 3. Additionally, refer to Appendix F, Environmental Commitments Record for a list of mitigation measures for the proposed project.

CHAPTER 5
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 and open house. 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 this chapter.

5.2 PUBLIC SCOPING PROCESS

Notice of Intent/Notice of Preparation

Pursuant to NEPA and CEQA, a Notice of Intent (NOI) and Notice of Preparation (NOP) were prepared for the project. The NOI was published in the Federal Register on October 14, 2008 (Figure 5.2-1a and sent to FHWA (Figure 5.2-1b). The NOP was issued by the State Clearinghouse on September 23, 2008, and the review was completed on October 27, 2008 (Figure 5.2-2).

USEPA submitted comments on the NOI and NOP. The following is a summary of responses and comments submitted for the NOP:

- The Native American Heritage Commission (NAHC) commented on cultural resources within the APE, specifically Native American cultural resources. NAHC asked that a sacred lands search be conducted, a mitigation plan be prepared for the accidental discovery of cultural resources, and that avoidance be considered if significant cultural resources are discovered during project activities. Chapter 3, Section 3.12, Cultural Resources, discusses the preparation of the various reports and includes coordination with local Native American tribes, and lists avoidance and mitigation measures.
- The County of San Diego Department of Planning and Land Use comments addressed the County's recommendation that Caltrans use County-approved guidelines for determining significance; the development of a Cooperative Agreement between Caltrans and the County; and consistency with the San Luis Rey River Park Master Park Plan. Other comments were in regard to the Draft NCMSCP, currently being developed in conjunction with the wildlife agencies. Additional comments pertained to traffic, signage, access for homes and businesses, and other related design features. Proposed park sites and access are discussed in Section 3.3, Parks and Recreational Facilities, and in Appendix B (Resources Evaluated Relative to the Requirements of Section 4(f)). Chapter 3, Section 3.20, Natural Communities, discloses the impacts to biological resources and discusses mitigation measures. Chapter 3, Section 3.14, Water Quality and Storm Water Runoff, discusses measures to minimize and avoid impacts to water

quality. Chapter 2, Project Alternatives, discusses the design features for the proposed alternatives.

- USEPA commented on potential cumulative impacts; impacts to water resources, air quality, biological resources, and cultural resources; and environmental justice. USEPA stressed the importance of carrying forward the analysis methodology for addressing the cumulative impacts of both the SR-76 Melrose to South Mission Road project into the SR-76 South Mission Road to I-15 project. Cumulative impacts are addressed in Chapter 3, Section 3.29. Chapter 3, Section 3.14, Water Quality and Storm Water Runoff, discusses measures to minimize and avoid impacts to water quality. Chapter 3, Section 3.20, discloses the impacts to biological resources and discusses mitigation measures. Air quality is discussed in Chapter 3, Section 3.18, Air Quality. Cultural resources are analyzed in Chapter 3, Section 3.12, Cultural Resources.
- CDFG comments specifically addressed the impacts to habitat connectivity associated with a linear highway project. They also requested that Caltrans adhere to the "no net loss of wetlands" regulation. The CDFG letter identified the need for Caltrans to secure a Section 1600 Streambed Alteration Agreement in the case that stream channels would be impacted. The letter also identifies the need for a CESA permit if the project would result in a taking of threatened or endangered species. CDFG requested that the biological resources section discuss in detail the biological resources within the area of potential effects, the project's potential impacts on these resources, and proposed mitigation for project impacts. Chapter 3, Section 3.20, Natural Communities, discloses the impacts to biological resources and discusses mitigation measures.

Public Scoping

A Public Scoping Meeting was held on October 22, 2008, from 5 p.m. to 7 p.m. to give the community an opportunity to review and comment on the proposed SR-76 project. The meeting was conducted in an "open house" format. Caltrans, SANDAG, and County of San Diego staff were in attendance to answer questions regarding project activities, studies, and schedule. Notices were emailed to the resource agencies and mailed to elected representatives and the public. The Notice of Public Meeting was published in the *North County Times* and the *Fallbrook Village Voice* newspapers in English, and the *Hispanos Unidos* newspaper in Spanish. A Spanish interpreter was present to translate for Spanish-speaking attendees. The Public Scoping Meeting was well attended, with approximately 75 attendees signing in. Comments were encouraged at the meeting and attendees supplied 43 written comments on comment sheets. Caltrans also accepted several comments that were supplied via mail after the meeting. In addition, a project Open House was held on December 1, 2008. The Open House was held in the same format as the Public Scoping Meeting. The Open House gave the public a second opportunity to review and comment on the proposed project.

Comments expressed at the Public Scoping Meeting and Open House include the following:

- The preference for either the Existing Alignment Alternative (Preferred Alternative) or the Southern Alignment Alternative. Both of these proposed alternatives and the No Build Alternative are discussed in Chapter 2 and the various impacts are discussed throughout this Final EIR/EIS.
- The desire for the project to be constructed within a small footprint. Chapter 2, Project Alternatives, discusses the proposed build alternatives. Environmental constraints have

been considered during project design, and every effort has been made to avoid and minimize project impacts.

- Requested a six-lane facility to be built, not a four-lane facility. Chapter 2, Project Alternatives, and Section 3.10, Traffic and Transportation/Pedestrian and Bicycle Facilities, discuss the demand for a four-lane facility with right-of-way and grading for channelization in various locations, based on traffic forecasts for year 2030.
- The desire for maintaining access to businesses along SR-76 during construction activities. Section 3.10, Traffic and Transportation/Pedestrian and Bicycle Facilities, discusses how, during construction activities, at least one lane of travel would be maintained.
- Requested information regarding, and copies of, draft environmental studies. The ongoing environmental surveys and studies were made available to the public along with the Draft EIR/EIS.
- Requested development of alternative transportation systems, including bike lanes. Section 3.10, Traffic and Transportation/Pedestrian and Bicycle Facilities, discusses how the proposed SR-76 project would construct roadway shoulders that accommodate bicyclists and pedestrians.
- Concerns regarding the emergency access routes. Section 3.10, Traffic and Transportation/Pedestrian and Bicycle Facilities, discusses the impacts to emergency responders.
- Concerns regarding access constraints to the proposed existing alignment from cross streets. Chapter 2, Project Alternatives, and Section 3.10, Traffic and Transportation/Pedestrian and Bicycle Facilities, address the intersection configurations and access to the alignments.
- Concerns regarding conservation and preservation of habitats near the San Luis Rey River. Chapter 1, Purpose and Need, discusses protecting and/or enhancing the human and natural environment along the SR-76 corridor as a major project objective.
- Comments regarding access to trails in the riverbed for hiking and equestrian uses after construction of SR-76. There is an existing informal “network” of trails within the river corridor and some may require relocation in coordination with the County of San Diego during development of the San Luis Rey River Park Master Plan and trail network, as discussed in Section 3.3, Park and Recreation Facilities.

Additional Project Outreach

Since 2001, the SR-76 Caltrans Project Manager attended meetings and gave presentations to local community sponsor and planning groups, homeowners associations, and chambers of commerce, and at city council meetings and local politician-sponsored meetings in an effort to update interested parties and the public on the status of the project (Table 5-1).

Table 5-1. Project Public Outreach Meetings

September 13, 2001	Bonsall Area for Rural Community (BARC) public meeting
March 2002	Bonsall Sponsor Group
June 2002	Jeffries Ranch Homeowners Association
January 2003	Bonsall Sponsor Group
June 2003	Jeffries Ranch Homeowners Association
November 20, 2003	Lightfoot Planning Group community meeting
March 18, 2004	Jeffries Ranch community-hosted meeting
April 7, 2004	Oceanside City Council presentation
April 20, 2004	Oceanside Transportation Commission presentation
June 2, 2004	County of San Diego public meeting in Bonsall (combination County Park and highway meeting)
June 22, 2004	North County Transit District regarding rural bus routes
November 2, 2004	Bonsall Sponsor Group
November 9, 2004	County-hosted meeting in Bonsall
January 20, 2005	County-hosted meeting in Bonsall
January 28, 2005	Senator Morrow and Bonsall representatives meeting
April 8, 2005	Public meeting hosted by “Fix 76 Now.com” in Fallbrook attended by SANDAG, Caltrans, and Congressman Issa
August 4, 2005	Vista Chamber of Commerce presentation
August 15, 2005	Meeting with Congressman Issa and NEPA agencies
January 3, 2006	Bonsall Sponsor Group
October 18, 2006	SR-76 Melrose Drive to Mission Public Scoping Meeting
January 30, 2007	Value Analysis Charette with Bonsall community leaders
October 8, 2008	Native American Consultation
October 22, 2008	Public Meeting for SR-76
November 20, 2008	Native American Consultation
December 1, 2008	Open House for SR-76
January 19, 2009	Fallbrook Community Planning Group
April 2009	Congressman Issa
April 7, 2009	Bonsall Sponsor Group
June 24, 2009	Vista Palomar Riders
October 6, 2009	Bonsall Sponsor Group
August 4, 2009	State Assembly Member Jeffries
September 14, 2009	Supervisor Horn
August 19, 2010	Fallbrook Revitalization Committee
September 1, 2010	Supervisor Horn
September 7, 2010	County of San Diego re: San Luis Rey River Park
September 20, 2010	Fallbrook Sponsor Group
September 23, 2010	Draft EIR/EIS Public Meeting
September 30, 2010	Intertribal TWG at Viejas
October 5, 2010	Fallbrook
October 13, 2010	ITOC Update
October 21, 2010	County of San Diego re: San Luis Rey River Park
December 2, 2010	County of San Diego
December 9, 2010	County of San Diego

5.3 SAFETEA-LU 6002 PUBLIC INVOLVEMENT AND COORDINATION PLAN

On August 10, 2005, President Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). 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 includes a Coordination Plan, which requires FHWA to enhance opportunities for coordination with federal, state, tribal, and local

government agencies and the public during the environmental review process for the project. Under the Caltrans assumption of responsibility pursuant to 23 USC 327, Caltrans was tasked with managing the Section 6002 process; preparing the EIS; and enhancing opportunities for coordination with the public and other federal, state, local, and tribal governmental agencies during the public development process. Compliance with the latter was accomplished in various fashions, including the NEPA 404 Integration process, which is discussed below. A Coordination Plan for the project has been developed and shared with these agencies prior to the various milestones.

Initiation of Agency Participation

Letters were sent on September 25, 2008, to request resource agency participation as a Cooperating Agency under NEPA, and/or a Participating Agency under Section 6002 of SAFETEA-LU. Letters were sent to the following federal, state, and local agencies:

- Cooperating Agencies: USACE, USFWS, and USEPA
- Participating Agencies: USACE; USEPA; USFWS; NOAA Fisheries Service; CDFG; CalEPA; Rincon Band of Mission Indians; San Diego County Water Authority; SANDAG; North County Fire Protection District; California Highway Patrol; County of San Diego; NAHC; SWRCB; and San Diego RWQCB

In response to the letters, USACE agreed to be a Cooperating Agency under 6002. USEPA, USFWS, CDFG, RWQCB, the County of San Diego, the San Diego County Water Authority, the North County Fire Protection District, NAHC, the Rincon Band of Luiseno Indians, California Highway Patrol, and NOAA agreed to be Participating Agencies.

Opportunities for Involvement

Purpose and Need

Caltrans coordinated with several agencies during the production of a draft purpose and need statement. Through the NEPA 404 process, Caltrans engaged USFWS, USEPA, and USACE in 2008 and 2009 during interagency meetings, and requested comments on the development of the purpose and need. Concurrence on the purpose and need was requested in January 2009. USACE and USEPA responded to this request with letters of concurrence dated September 4, 2009, and July 20, 2009, respectively. USFWS and RWQCB responded to this request with letters of concurrence on July 28, 2009, and August 3, 2009, respectively. The NEPA 404 process is further discussed in Section 5.4, below.

Range of Alternatives

Participating agencies were provided the opportunity for input into the identification of the range of alternatives and level of detail required in alternatives analysis via the NOI/NOP, Public Scoping Meeting exhibits and fact sheet, and mass-mailed scoping meeting information flyer. Both of the newspaper advertisements included a map and a description of the project's proposed alternatives. In addition, in November 2009, letters requesting concurrence on the project criteria and range of project alternatives were sent to the agencies. Concurrence letters were received from USACE (April 13, 2010), USEPA (April 8, 2010) and USFWS (April 5, 2010).

Preferred Alternative

On October 24, 2011, cooperating and participating agencies were provided information regarding identification of the Existing Alignment Alternative as the Preferred Alternative and a copy of the Coordination Plan for the proposed project. Response was received in November 2011 from the Rincon Band of Luiseño Indians.

5.4 ADDITIONAL CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES

NEPA/404 MOU Integration Process

In April 2006, Caltrans signed an interagency MOU committing to integrate NEPA and Section 404 of the Clean Water Act (CWA) in transportation planning, programming, and implementation stages for federal aid surface transportation projects requiring an Individual permit under Section 404. The consolidation of these processes provides for more timely decision-making while improving the overall quality of those decisions.

The guidance in the April 2006 National Environmental Policy Act and Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects in California MOU between Caltrans, FHWA, and federal resource agencies has been followed. The MOU process is composed of three checkpoints: (1) Purpose and Need Statement, (2) identification of the range of alternatives and consideration of the criteria used to select and analyze the range of alternatives to be studied in the EIR/EIS, and (3) Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) Determination and Conceptual Mitigation Plan.

In September 2008, Caltrans began coordination efforts with the federal resource and regulatory agencies, including USACE, USFWS, USEPA, CDFG, and RWQCB, who were invited to participate in the discussions to implement the requirements of the MOU. Table 5-2 provides a list of NEPA/404 meetings held and participating agencies attending the meetings during the project development process.

Table 5-2. NEPA/404 Meetings

Date	Topic(s)	NEPA/404 Agencies
05/22/08	Kick-off meeting	Caltrans, USFWS, USEPA, USACE
01/22/09	Purpose and Need	Caltrans, USFWS, USEPA, USACE, CDFG
07/2009	Received letters of concurrence on Purpose and Need	USFWS, USEPA, USACE
07/29/09	Screening Criteria, Range of Alternatives	Caltrans, USEPA, USFWS
04/2010	Received letters of concurrence on Range of Alternatives and Selection Criteria	USFWS, USEPA, USACE
01/26/11	Preferred Alternative and Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA)	Caltrans, USEPA, USACE, USFWS, CDFG
03/11 and 04/11	Received letters of concurrence on the Preferred Alternative and Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA)	USFWS, USEPA, USACE, NOAA Fisheries Service

Letters requesting resource/regulatory agency concurrence on the project's Purpose and Need Statement were mailed on two separate occasions, before and after an interagency meeting held on January 22, 2009. The resource agencies coordinated with Caltrans during the

interagency meetings and provided preliminary comments on a draft of the Purpose and Need Statement and those comments were addressed by Caltrans. Caltrans received guidance on developing the Purpose and Need Statement during interagency meetings. Concurrence on Purpose and Need was requested at this meeting from USACE, USFWS, and USEPA. Concurrence on Purpose and Need letters were received in July 2009 and are included at the end of this chapter. Concurrence letters are included as Figures 5.4-1 through 5.4-5.

Letters requesting resource/regulatory agency concurrence on the project's Alternatives and Alternative Selection Criteria were submitted to the resource agencies on November 16, 2009. The resource agencies provided input to Caltrans on the alternatives and the selection criteria for the proposed alternatives to be discussed in the EIR/EIS during the NEPA/404 meetings. Letters concurring on alternatives and alternatives selection criteria were received in April 2010 and are included at the end of this chapter as Figures 5.4-6, 5.4-7, and 5.4-8.

Letters requesting resource/regulatory agency concurrence on the project's Preferred Alternative, Preliminary LEDPA and concurrence on conceptual mitigation were submitted to the resource agencies on February 28, 2011. The agencies provided input for the identification of the Existing Alignment Alternative as the Preferred Alternative and preliminary LEDPA during the January 2011 NEPA/404 meeting. Concurrence letters on the Preferred Alternative and preliminary LEDPA were received in March and April 2011. The concurrence letters are included as Figures 5.4-9 through 5.4-12 at the end of this chapter.

Following public circulation of the Draft EIR/EIS, Caltrans prepared an Alternatives Analysis in accordance with Section 404(b)(1) of the CWA that identified the Existing Alignment Alternative (Preferred Alternative) as the LEDPA and submitted it to USACE (Appendix I). USACE responded with a letter of concurrence with the identification of the Existing Alignment Alternative (Preferred Alternative) as the preliminary LEDPA dated April 18, 2011.

Section 7 Consultation under the Federal Endangered Species Act

The 1973 FESA and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of the FESA, federal agencies, such as FHWA, are required to consult with USFWS and NOAA Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or to destroy or adversely modify designated critical habitat. NOAA Fisheries Service responded confirming conclusion of the Section 7 consultation process in June 2010 (Figure 5.4-13). USFWS was contacted in order to obtain a specific species list for the biological study area of the proposed SR-76 highway improvement project. USFWS responded in a letter that included the Species List pursuant to Section 7 of the FESA (Figure 5.4-14). A Biological Opinion confirming conclusion of the Section 7 consultation process was received from the USFWS on September 22, 2011 and is included as Appendix K.

State Historic Preservation Officer Coordination

Coordination with the State Historic Preservation Officer (SHPO) was initiated on February 17, 2010, per Section 106, Programmatic Agreement (PA), which became effective on January 1, 2004. Under the PA, Caltrans determined a Finding of No Adverse Effect with Standard Conditions-ESAs, according to the Stipulation X.B(2) of the PA and 36 CFR 800.5(b). An ESA Action Plan was submitted in support of the finding. SHPO responded with "No objections to the findings" on March 29, 2010 (Figure 5.4-15) and "Findings on Standard Conditions for the

Vessels Mitigation Site" in July 2011 (Figure 5.4-16). Native American coordination regarding cultural resources was initiated by Caltrans in April 2006. This coordination is summarized in the Historic Property Survey Report.

Native American Heritage Commission and Native American Coordination

Consultation with NAHC was first initiated in May 2006, and consultation continues with the appropriate tribes and Native American individuals. Native American consultation meetings took place on October 8, 2008, and November 20, 2008, at the Bonsall Community Center. Caltrans met with members of Pala, Pechanga, and San Luis Rey Bands on December 23, 2010, to address their comments and concerns regarding the Draft EIR/EIS. Caltrans held an in-field meeting with members of the San Luis Rey Band in June and July 2011 to confirm the delineation of the ESAs established for this project. Coordination would continue throughout the project construction.

Draft EIR/EIS and Public Hearing

The Draft EIR/EIS was released for public review in September 2010. The 60-day comment period was open from September 3, 2010 until November 2, 2010. The Public Hearing was held on September 23, 2010, from 5:00 p.m. to 8:00 p.m. at the Bonsall Community Center, located at 31505 Old River Road, Bonsall. The Notice of Availability (NOA) of the Draft EIR/EIS was published in the Federal Register on September 3, 2010. The Federal Register notice is included at the end of this chapter as Figure 5.4-17. Notices were mailed to elected officials and resource agencies. The NOA was published in the North County Times and the Fallbrook Village News newspapers in English and the Hispanos Unidos newspaper in Spanish (Figures 5.4-18 and 5.4-19) and included public hearing information. A Spanish interpreter was present at the Public Hearing to translate for Spanish-speaking attendees. This meeting provided the public an opportunity to ask questions, peruse project information boards, discuss agency coordination, and discuss project and construction activities and schedule with staff from Caltrans and the County of San Diego. The meeting was attended by 246 interested community members and resulted in 95 written comments on comment sheets and 15 oral comments given to the stenographer. Four federal agencies; three Native American tribes; three state agencies; five local agencies, including the County of San Diego; one local planning group; three petitions; and approximately 308 members of the community commented on the Draft EIR/EIS. Caltrans also accepted comments that were supplied via e-mail and fax after the meeting. In addition, SANDAG operated a web-based comment submittal to allow the public to provide comments over the internet. Substantive comments of an environmental nature and respective responses are included in Appendix M of this Final EIR/EIS.

FHWA Conformity Determination

Caltrans submitted a request for the project-level conformity determination for the SR-76 South Mission Road to I-15 Highway Improvement Project to FHWA on April 4, 2011, pursuant to 23 USC 327(a)(2)(B)(ii)(I). The project is included in SANDAG's currently conforming 2030 RTP and 2010 RTIP. FHWA made a finding of conformity for the 2030 Revenue Constrained RTP on December 10, 2007, and a finding of conformity for the 2010 RTIP on December 14, 2010. As required by 40 CFR 93.116 and 93.123, the localized CO analyses were included in the documentation submitted to FHWA. The analyses demonstrated that the project would not create any new violation of the standards or increase the severity or number of existing violations. FHWA found that the Conformity Determination for the SR-76 South Mission Road to I-15 Highway Improvement Project conforms to the State Implementation Plan in accordance

with 40 CFR Part 93. FHWA's letter is included as Appendix J. In addition, FHWA provided confirmation of the acceptability of the I-15/SR-76 interchange modification, included as Appendix N.

Coordination with the County of San Diego

Section 4(f) of the of the U.S. Department of Transportation Act of 1966 stipulates that FHWA and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land.
- The action includes all possible planning to minimize harm to the property resulting from use.

The Safe, Accountable, Flexible, Transportation Equity Act – A Legacy for Users (SAFETEA-LU) Section 6009(a) amends existing Section 4(f) language to allow USDOT to determine that certain uses of Section 4(f) land would have no adverse effect on the protected resource. When this is the case, and the responsible official with jurisdiction over the resource agrees in writing, compliance with Section 4(f) is greatly simplified. De minimis impacts on publicly owned parks are defined as those that do not adversely affect the activities, features, and attributes that make the property eligible for Section 4(f) protection.

Caltrans has concluded that a resource that may warrant protection under Section 4(f) of the U.S. Department of Transportation Act of 1966 is located immediately adjacent to the proposed SR-76 South Mission Rd. to I-15 project. The potential Section 4(f) resource includes the general outline of the proposed San Luis Rey River Park area and planned and informal trails that are within and outside the Park, and that are currently located on publicly owned land.

In a letter dated September 9, 2011, Caltrans reviewed its coordination with the County of San Diego, described the San Luis Rey River Park -related 4(f) resource, explained the impacts to the resource, and related the measures proposed by the project to minimize harm to the resource. The letter further stated Caltrans' finding that the proposed project would not adversely affect any of the activities, features, or attributes of the parcel that qualify the resource for protection under Section 4(f) and pledged continuance of planning and coordination with the County, including signing an MOU with the County to construct trails and fulfill certain related conditions as part of the SR-76 South Mission Rd. to I-15 project. The letter requested the County, under the conditions stipulated in the MOU, to concur with Caltrans' de minimis finding for the San Luis Rey River Park -related resources. The County concurred with Caltrans' de minimis finding on October 4, 2011, as documented in Appendix L. The MOU currently being developed would guide continued coordination with the County.

5.5 PROJECT DEVELOPMENT TEAM MEETINGS

The SR-76 South Mission Road to I-15 PDT was assembled by Caltrans in 2008 to serve as the technical advisory committee and internal decision-making body for the project. The PDT consists of Caltrans' staff representatives from Caltrans Program Management, Environmental, Design, Maintenance, and Hydraulics. The County of San Diego participated in PDT meetings to coordinate development of the San Luis Rey River Park with the development of the highway

project. The PDT met monthly during the course of the project development as issues arose requiring technical direction or resolution.

After public review of the Draft EIR/EIS and full consideration of the technical studies prepared, public comments, Native American, and resource agency input, Caltrans identified the Existing Alignment Alternative as the preliminary Preferred Alternative. Caltrans' selection was presented to the resource and regulatory agencies at the January 26, 2011, NEPA MOU meeting. In letters to USEPA, USFWS, NOAA Fisheries Service, and USACE dated February 28, 2011, Caltrans asked for concurrence on the selection. All four of the agencies concurred with Caltrans' selection: USFWS in a letter dated March 22, 2011; USEPA in a letter dated March 25, 2011; NMFS in a letter dated March 29, 2011; and USACE in a letter dated April 18, 2011.

Following circulation of the Final EIR/EIS, Caltrans 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 whether to issue a Record of Decision (ROD) under NEPA. The current project schedule for the Existing Alignment Alternative (Preferred Alternative) anticipates a final environmental document in 2011 and approval of the Record of Decision (ROD) in 2012. Design for Stage I of this project (the interchange) is expected in 2012. Design for Stage II (the roadway) is expected in 2013. Construction completion is expected in 2015.

The permits listed in Table 2-3 would be required. Caltrans would continue to work closely with all of the agencies to maintain communication and coordination throughout the project development process and receipt of the various permits.

60750 Federal Register / Vol. 73, No. 199 / Tuesday, October 14, 2008 / Notices

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: San Diego, CA

AGENCY: Federal Highway Administration (FHWA).

ACTION: Notice of Intent.

SUMMARY: FHWA is issuing this notice to advise the public that an Environmental Impact Statement (EIS) will be prepared for the proposed State Route 76 (SR–76) South Mission Road to the Interstate 15 (I–15) interchange highway improvement project in San Diego County, California.

FOR FURTHER INFORMATION CONTACT: Susanne Glasgow, Deputy District Director, at the California Department of Transportation, District 11—Environmental Division, M.S.–242, 4050 Taylor Street, San Diego, California 92110, Telephone (619) 688–0100.

SUPPLEMENTARY INFORMATION: Effective July 1, 2007, the Federal Highway Administration assigned and Caltrans assumed environmental responsibilities for this project, pursuant to 23 U.S.C. 327. Caltrans will prepare an Environmental Impact Statement (EIS) on a proposal for a highway improvement project in San Diego County, California. The proposed project would upgrade and improve operations on SR–76 from the vicinity of South Mission Road to the vicinity of the SR–76/I–15 interchange. The proposed improvements would upgrade the roadway to current design standards and improve operations of intersections and at the interchange on and off ramps. These improvements are considered necessary to provide for the increase in existing and projected traffic demand. The total length of the proposed project is approximately 5.2 miles. Preliminary alternatives under consideration include (1) Take no action; (2) construct improvements along the existing roadway; and (3) construct a new southern alignment. Anticipated final approvals for the proposed project include, but are not limited to, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, Consultation under Section 2081 of the California Endangered Species Act, conformance with the Section 404 MOU Integration Process, conformance with Section 404 of the Clean Water Act, conformance with Section 1602 of the California Department of Fish and Game Code, conformance with Section 4(f), and conformance with the Clean Air Act.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, Cooperating/Participating Agencies (including Tribal governments), local agencies, and to private organizations and citizens who have previously expressed or are known to have an interest in this proposal. National Environmental Policy Act documentation for the proposed project began in March 2008. The Public Scoping meeting will be held at the Bonsall Community Center in Bonsall, California on October 22, 2008, from 5 p.m. to 8 p.m. In addition, a public hearing will be held. Public notice will be given of the time and place of the public hearing (as applicable). The EIS will be available for public and agency review and comment prior to the public hearing.

To ensure that the full range of issues to this proposed action is addressed and all significant issues are identified, comments and suggestions are invited from all interested parties.

Comments or questions concerning this proposed action and the EIS should be directed to the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: October 7, 2008.

Nancy E. Bobb,

Director, State Programs, Sacramento, California.

[FR Doc. E8–24254 Filed 10–10–08; 8:45 am]

BILLING CODE 4910–22–P

Figure 5.2-1a
SR-76 Notice of Intent as Published in Federal Register
(page 1 of 1)

4910-22

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL IMPACT STATEMENT: SAN DIEGO, CALIFORNIA

AGENCY: California Department of Transportation (Caltrans)

ACTION: Notice of Intent

SUMMARY: Caltrans is issuing this notice to advise the public that an Environmental Impact Statement (EIS) will be prepared for the proposed State Route 76 (SR-76) South Mission Road to the Interstate 15 (I-15) interchange highway improvement project in San Diego County, California.

FOR FURTHER INFORMATION CONTACT: Susanne Glasgow, Deputy District Director, at the California Department of Transportation, District 11 – Environmental Division, M.S.-242, 4050 Taylor Street, San Diego, California 92110, Telephone (619) 688-0100.

SUPPLEMENTARY INFORMATION: Effective July 1, 2007, the Federal Highway Administration assigned, and Caltrans assumed, environmental responsibilities for this project pursuant to 23 U.S.C. 327. Caltrans will prepare an Environmental Impact Statement (EIS) on a proposal for a highway improvement project in San Diego County, California. The proposed project would upgrade and improve operations on SR-76, from the vicinity of South Mission Road to the vicinity of the SR-76/I-15 interchange. The proposed improvements would upgrade the roadway to current design standards, improve operations of intersections and at the

76 East NOI revised.doc 1

Figure 5.2-1b
Notice of Intent
(page 1 of 3)

interchange on and off ramps. These improvements are considered necessary to provide for the increase in existing and projected traffic demand. The total length of the proposed project is approximately 5.2 miles. Preliminary alternatives under consideration include (1) take no action; (2) construct improvements along the existing roadway; and (3) construct a new southern alignment. Anticipated final approvals for the proposed project include, but are not limited to, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act; Consultation under Section 2081 of the California Endangered Species Act; conformance with the Section 404 MOU Integration Process; conformance with Section 404 of the Clean Water Act; conformance with Section 1602 of the California Department of Fish and Game Code; conformance with Section 4(f), and conformance with the Clean Air Act.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal; State; Cooperating/Participating Agencies (including Tribal governments); local agencies; and, to private organizations and citizens who have previously expressed or are known to have interest in this proposal. National Environmental Policy Act documentation for the proposed project began in March 2008. The Public Scoping meeting will be held at the Bonsall Community Center in Bonsall, California on October 22, 2008, from 5:00 p.m. to 8:00 p.m. In addition, a public hearing will be held. Public notice will be given of the time and place of the public hearing (as applicable). The EIS will be available for public and agency review and comment prior to the public hearing.

To ensure that the full range of issues to this proposed action are addressed and all significant issues are identified, comments and suggestions are invited from all interested parties.

76 East NOI revised.doc 2

Figure 5.2-1b
Notice of Intent
(page 2 of 3)

Comments or questions concerning this proposed action and the EIS should be directed to Caltrans at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.) (Required information)

Issued on: September 17, 2008

SUSANNE GLASGOW
Deputy District Director for Environmental, District 11
California Department of Transportation
San Diego, California

76 East NOI revised.doc 3

Figure 5.2-1b
Notice of Intent
(page 3 of 3)

SCH NO. _____

NOTICE OF PREPARATION

To: _____

From: California Dept. of Transportation
4050 Taylor St.
San Diego, CA 92110

Subject: **Notice of Preparation of a Draft Environmental Impact Report**
Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Title: State Route 76 (SR-76) – South Mission Road to Interstate 15 (I-15) Highway Project

Project Location: SR-76 in northern San Diego County from South Mission Avenue to just east of the SR-76/I-15 interchange in the unincorporated communities of Bonsall and Fallbrook, County of San Diego.

Project Description: The project proposes to widen and realign SR-76 through a rural area of northern San Diego County. These improvements would include upgrading the roadway to current design standards and improving operations. The proposed project would minimize environmental impacts to cultural resource and sensitive wildlife and associated habitat.

This is to inform you that the California Department of Transportation (Caltrans) will be the lead agency and will prepare an environmental impact report for the project described below. Your participation as a responsible agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that 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.

A more detailed project description (Attachment A), project location map (Attachment B), project vicinity map (Attachment C), and the potential environmental effects (Attachment D) are contained in the attached materials.

A copy of the Initial Study (___is) (X is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to Kelly Finn, Environmental Analysis Branch Chief, at the address shown above. Please supply us with the name for a contact person in your agency.

Date 9/18/08

Signature Kelly Finn
Title Environmental Analysis Branch Chief
Phone (619) 688-0229

Figure 5.2-2
Notice of Preparation
(page 1 of 1)

DEPARTMENT OF THE ARMY

September 4, 2009

REPLY TO
ATTENTION OF:
Office of the Chief
Regulatory Division

Susanne Glasgow
Deputy District Director, Environmental
California Department of Transportation, District 11
4050 Taylor Street, MS-242
San Diego, California 92110

Dear Ms. Glasgow:

In response to your request dated June 18, 2009, the U.S. Army Corps of Engineers (USACE) has been asked to provide concurrence on the Purpose and Need statement for the proposed State Route (SR) 76, Melrose to Mission Project. Concurrence is requested pursuant to the National Environmental Policy Act, Clean Water Act Section 404 Memorandum of Understanding (NEPA/404 MOU) for Federal Aide Surface Transportation Projects in California.

The Federal Highway Administration (FHWA) has delegated responsibilities for this project under NEPA, to the State of California Department of Transportation (Caltrans), pursuant to the Memorandum of Understanding between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.

Caltrans is preparing a Draft Environmental Impact Statement/Environmental Impact Report (DEIS/DEIR) for proposed improvements on SR-76 for an approximately 5.1 miles, from South Mission Road to the SR-76 and Interstate (I) 15 interchange in San Diego County. Transportation improvements within the proposed project area will result in impacts to "waters of the United States" and various sensitive plants, wildlife, and their habitats. As documented in your concurrence request, the project purpose is:

> *To maintain or improve the existing and future traffic operations in the SR-76 corridor, between South Mission Road and I-15, in order to improve the safe and efficient local and regional movement of people and goods, while minimizing environmental and community impacts for the planning design year of 2030.*

Figure 5.4-1
USACE NEPA 404 Concurrence on Purpose and Need Letter
(page 1 of 2)

-2-

Based on on-going coordination with Caltrans, the Environmental Protection Agency (EPA), and the U.S. Fish and Wildlife Service (USFWS) during interagency meetings, the Corps (USACE) concurs with the Purpose and Need submitted as part of your request.

The Corps appreciates the opportunity afforded for early participation in the NEPA/404 MOU process for the SR-76 Melrose to Mission Project and we look forward to our continued involvement. Should you have any questions, please contact Stephanie Hall of my staff at (213) 452-3410, or via e-mail at: Stephanie.J.Hall@usace.army.mil. Please refer to this letter and SPL-2009-00051-SJH in your reply.

Sincerely,

Mark D. Cohen
Assistant Deputy Chief,
Regulatory Division

Cc:
Susan Sturges, EPA
Janet Stuckrath, USFWS
Chris Means, RWQCB-San Diego
Pam Beare, CDFG

Figure 5.4-1
USACE NEPA 404 Concurrence on Purpose and Need Letter
(page 2 of 2)

DEPARTMENT OF THE ARMY

September 4, 2009

REPLY TO
ATTENTION OF:
Office of the Chief
Regulatory Division

Susanne Glasgow
Deputy District Director, Environmental
California Department of Transportation, District 11
4050 Taylor Street, MS-242
San Diego, California 92110

Dear Ms. Glasgow:

In response to your request dated June 18, 2009, the U.S. Army Corps of Engineers (USACE) has been asked to provide concurrence on the Purpose and Need statement for the proposed State Route (SR) 76, South Mission Road to Interstate (I) 15 Project. Concurrence is requested pursuant to the National Environmental Policy Act, Clean Water Act Section 404 Memorandum of Understanding (NEPA/404 MOU) for Federal Aid Surface Transportation Projects in California.

The Federal Highway Administration (FHWA) has delegated responsibilities for this project under NEPA, to the State of California Department of Transportation (Caltrans), pursuant to the Memorandum of Understanding between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.

Caltrans is preparing a Draft Environmental Impact Statement/Environmental Impact Report (DEIS/DEIR) for proposed improvements on SR-76 for an approximately 5.2 miles, from South Mission Road to the SR-76 and Interstate (I) 15 interchange, in San Diego County. Transportation improvements within the proposed project area will result in impacts to "waters of the United States" and various sensitive plants, wildlife, and their habitats. As documented in your concurrence request, the project purpose is:

> *To maintain or improve the existing and future traffic operations in the SR-76 corridor, between South Mission Road and I-15, in order to improve the safe and efficient local and regional movement of people and goods, while minimizing environmental and community impacts for the planning design year of 2030.*

Figure 5.4-2
USACE Addendum to NEPA 404 Concurrence on Purpose and Need Letter
(page 1 of 2)

-2-

Based on on-going coordination with Caltrans, the Environmental Protection Agency (EPA), and the U.S. Fish and Wildlife Service (USFWS) during interagency meetings, the Corps (USACE) concurs with the Purpose and Need submitted as part of your request.

The Corps appreciates the opportunity afforded for early participation in the NEPA/404 MOU process for the SR-76 Mission to I-15 Project and we look forward to our continued involvement. Should you have any questions, please contact Stephanie Hall of my staff at (213) 452-3410, or via e-mail at: Stephanie.J.Hall@usace.army.mil. Please refer to this letter and SPL-2009-00051-SJH in your reply.

Sincerely,

for Stephanie J. Hall

Mark D. Cohen
Assistant Deputy Chief,
Regulatory Division

Cc:
Susan Sturges, EPA
Janet Stuckrath, USFWS
Chris Means, RWQCB-San Diego
Pam Beare, CDFG

Figure 5.4-2
USACE Addendum to NEPA 404 Concurrence on Purpose and Need Letter
(page 2 of 2)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

July 20, 2009

Susanne Glasgow
California Department of Transportation District 11
4050 Taylor Street, M.S.-242
San Diego, California 92110

Dear Ms. Glasgow:

The U.S. Environmental Protection Agency (EPA) is writing in response to your request of June 18, 2009 for concurrence on the Purpose and Need statement for the proposed State Route 76 Melrose to Mission (SR-76 East) Project. The purpose of this letter is to express EPA's "Agreement" with the Purpose and Need statement in accordance with the April 2006 *National Environmental Policy Act and Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects Memorandum of Understanding* (NEPA/404 MOU).

The State of California has assumed Federal Highway Administration (FHWA) responsibilities under NEPA for this project pursuant to the *Memorandum of Understanding Between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.* Under the pilot program, the California Department of Transportation (Caltrans) has also assumed all of FHWA's responsibilities for environmental coordination and consultation under other federal environmental laws pertaining to the review or approval of projects under the Pilot Program, including acting as FHWA under the NEPA/404 MOU.

Caltrans is preparing a Draft Environmental Impact Statement (DEIS) for proposed upgrades and operational improvements on SR-76 for a total length of about 5.1 miles from the vicinity of South Mission Road to the vicinity of the SR-76 and Interstate 15 (I-15) interchange in San Diego County. Corridor improvements in the project area will result in impacts to the San Luis Rey River and associated habitat. EPA has coordinated with Caltrans, as well as the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, in the development of the Purpose and Need statement during interagency meetings, and has also provided preliminary comments on a draft Purpose and Need statement in June 2008 and February 2009. We are pleased that the concerns of the federal regulatory agencies have been addressed through the NEPA/404 MOU coordination process. EPA agrees with the Purpose and Need statement as identified in the attachment submitted to EPA on June 18, 2009.

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Figure 5.4-3
USEPA NEPA 404 Concurrence on Purpose and Need Letter
(page 1 of 2)

Thank you for this opportunity to participate in the development of the SR-76 East Purpose and Need statement. We look forward to continued participation in this project through the NEPA/404 MOU process and are available to answer questions. If you have any questions, please feel free to contact Connell Dunning, Transportation Team Leader, at 415-947-4161, or Susan Sturges at 415-947-4188 (sturges.susan@epa.gov) or Elizabeth Goldmann at 415-972-3398 (goldmann.elizabeth@epa.gov), the lead reviewers for this project.

Sincerely,

Connell Dunning

For Kathleen M. Goforth, Manager
Environmental Review Office (CED-2)

cc: Janet Stuckrath, U.S. Fish and Wildlife Service
Stephanie Hall, U.S. Army Corps of Engineers
Pam Beare, California Department of Fish and Game
Chris Means, Regional Water Quality Control Board

2

Figure 5.4-3
USEPA NEPA 404 Concurrence on Purpose and Need Letter
(page 2 of 2)

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-09B0003-09TA1021

JUL 28 2009

Ms. Susanne Glasgow
California Department of Transportation District 11
4050 Taylor Street, M.S.-242
San Diego, California 92110

Subject: State Route 76 – South Mission Road to Interstate 15 Project – Request for Concurrence on Purpose and Need

Dear Ms. Glasgow:

We responding to your June 18, 2009, letter requesting concurrence on the Purpose and Need statement for the proposed State Route 76 South Mission to Interstate 15 (SR-76 East) Project. The Service agrees with the Purpose and Need statement in accordance with the April 2006 *National Environmental Policy Act and Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects Memorandum of Understanding* (NEPA/404 MOU).

Caltrans has assumed the Federal Highway Administration's (FHWA) responsibilities under the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) for this project in accordance with Section 6005 the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 2005*, as described in the National Environmental Policy (NEPA) *Delegation Pilot Program Memorandum of Understanding between FHWA and Caltrans* (effective July 1, 2007) and codified in 23 U.S.C. 327(a)(2)(A).

The Service has coordinated with Caltrans, as well as the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers, in the development of the Purpose and Need statement during interagency meetings and provided preliminary comments on a draft Purpose and Need statement in June 2008 and February 2009. The Service concurs with the June 18, 2009, version of the Purpose and Need for SR-76 East.

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Figure 5.4-4
USFWS NEPA 404 Concurrence on Purpose and Need Letter
(page 1 of 2)

Ms. Susanne Glasgow (FWS-SDG-09B0003-09TA1021) 2

We appreciate the opportunity to participate in the development of the SR-76 East Purpose and Need statement. We look forward to continued participation in this project through the NEPA/404 MOU process. If you have any questions or comments pertaining to this letter, please contact Janet Stuckrath at (760) 431-9440, ext. 270.

Sincerely,

Karen A. Goebel
for Assistant Field Supervisor
U.S. Fish and Wildlife Service

cc: Stephanie Hall, U.S. Army Corps of Engineers
Connell Dunning, U.S. Environmental Protection Agency
Pam Beare, California Department of Fish and Game
Chris Means, Regional Water Quality Control Board

Figure 5.4-4
USFWS NEPA 404 Concurrence on Purpose and Need Letter
(page 2 of 2)

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4353
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

August 3, 2009

Ms. Susanne Glasgow
Deputy Director, Environmental
Caltrans, District 11
4050 Taylor Street, M.S. 242
San Diego CA, 92123-4353

In reply refer to:
CIWQS No.: 742294: cmeans

Dear Ms. Glasgow:

SUBJECT: Letter of Concurrence on the Purpose and Need Statement for the State Route 76 South Mission Road to Interstate 15 Highway Improvement Project Pursuant to Section 6002 of SAFETEA-LU

The California Regional Water Quality Control Board, San Diego Region (Regional Board) has reviewed your July 15, 2009 submittal request for concurrence on the Purpose and Need Statement for the State Route 76 South Mission to I-15 project.

The "Purpose and Need" statement is an important element in the ongoing collaborative environmental review process between Caltrans and State and Federal resource agencies, and will serve as the basis for developing the range of alternatives to be addressed in the Draft Environmental Impact Report/Draft Environmental Impact Statement to be prepared for the project.

The Regional Board concurs with the Purpose and Need statement as provided in the attachment to the letter submitted on July 15, 2009.

We look forward to continuing to work with Caltrans to promote environmentally sustainable transportation projects within our region. Please contact Christopher Means of my staff at (858) 637-5581, or by email at cmeans@waterboards.ca.gov.

Respectfully,

JOHN H. ROBERTUS
Executive Officer

JHR:dtb:cjm

California Environmental Protection Agency

Recycled Paper

Figure 5.4-5
RWQCB NEPA 404 Concurrence on Purpose and Need Letter
(Page 1 of 2)

Ms. Glasgow - 2 - August 3, 2009

cc:

Ms. Kelly Finn
Caltrans, District 11
4050 Taylor Street
San Diego, CA 92110
kelly_finn@dot.ca.gov

Ms. Pam Beare
California Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
PBeare@dfg.ca.gov

Ms. Stephanie Hall
U.S. Army Corps of Engineers, Regulatory Branch
P.O Box 532711
Los Angeles, CA 90053-2325
stephanie.j.hall@usace.army.mil

California Environmental Protection Agency

Recycled Paper

Figure 5.4-5
RWQCB NEPA 404 Concurrence on Purpose and Need Letter
(Page 2 of 2)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901
APR 0 8 2010

Susanne Glasgow
California Department of Transportation District 11
4050 Taylor Street, M.S.-242
San Diego, California 92110

Dear Ms. Glasgow:

The U.S. Environmental Protection Agency (EPA) is writing in response to your request of November 16, 2009 for concurrence on project criteria for the selection of project alternatives and on the range of project alternatives developed for the proposed State Route 76 South Mission Road to Interstate 15 (SR-76 East) Project. EPA has coordinated with the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service to provide early regulatory agency input for this transportation project pursuant to the April 2006 *National Environmental Policy Act and Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects Memorandum of Understanding* (NEPA/404 MOU). EPA appreciates the efforts of California Department of Transportation (Caltrans) in incorporating agency feedback provided to date. The April 2006 version of the NEPA/404 MOU provides a checkpoint for EPA "agreement" on the range of alternatives (including selection criteria), in place of "concurrence", so this letter documents EPA's agreement on the range of alternatives and selection criteria.

The State of California has assumed Federal Highway Administration (FHWA) responsibilities under NEPA for this project pursuant to the *Memorandum of Understanding Between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.* Under the pilot program, Caltrans has also assumed all of FHWA's responsibilities for environmental coordination and consultation under other federal environmental laws pertaining to the review or approval of projects under the Pilot Program, including acting as FHWA under the NEPA/404 MOU.

Selection Criteria and Range of Alternatives

EPA offers our agreement on selection criteria and on the following alternatives to be fully analyzed in the Draft Environmental Impact Statement (DEIS), as identified in the attachment submitted to EPA on November 16, 2009 with clarifications provided via email on March 4, 2010:

(1) No Action
(2) Existing Alignment Alternative (Alternative 2)
(3) Southern Alignment Alternative (Alternative 4)

EPA offers our agreement recognizing that Caltrans has committed to work with the agencies to further avoid and minimize impacts associated with common elements of the Build Alternatives, including the proposed median and the park and ride facility. In addition, EPA

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Figure 5.4-6
USEPA NEPA 404 Concurrence on Alternatives and Selection Criteria Letter
(page 1 of 2)

recommends that Caltrans include a summary in the DEIS of the Lilac Road Alternative with a discussion of why it was eliminated for consideration as a viable alternative.

Next Steps

Through continued interagency coordination, EPA will provide feedback on specific design alternatives to further avoid and minimize impacts to environmental resources. As the next step in the NEPA/404 MOU integration process, we will review and provide comments on the Draft Environmental Impact Statement (DEIS), and subsequently, coordinate with Caltrans, the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service on identification of the preliminary least environmentally damaging practicable alternative (LEDPA).

Thank you for this opportunity to participate in the development of the SR-76 East Selection Criteria and Range of Alternatives. We look forward to continued participation in this project through the NEPA/404 MOU process and are available to answer questions. If you have any questions, please feel free to contact Susan Sturges at 415-947-4188 (sturges.susan@epa.gov) or Elizabeth Goldmann at 415-972-3398 (goldmann.elizabeth@epa.gov), the lead reviewers for this project.

Sincerely,

Connell Dunning

Connell Dunning, Transportation Team Supervisor
Environmental Review Office
Communities and Ecosystems Division

Cc: Janet Stuckrath, Fish and Wildlife Service
Stephanie Hall, U.S. Army Corps of Engineers
Marian Fluharty, California Department of Fish and Game
Linda Pardy, San Diego Regional Water Quality Control Board

2

Figure 5.4-6
USEPA NEPA 404 Concurrence on Alternatives and Selection Criteria Letter
(page 2 of 2)

DEPARTMENT OF THE ARMY
Los Angeles District, Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

April 13, 2010

REPLY TO
ATTENTION OF:
Office of the Chief
Regulatory Division

Susanne Glasgow
Deputy District Director, Environmental Division
California Department of Transportation - District 11
4050 Taylor Street, MS-242
San Diego, California 92110

Dear Ms. Glasgow:

This letter is in response to your request of November 16, 2009, for concurrence on the project criteria for the selection of project alternatives, and on the range of alternatives for the proposed State Route (SR) 76, South Mission Road to Interstate (I) 15, also known as the SR-76 East Project. Pursuant to the April 2006 National Environmental Policy Act and Clean Water Act, Section 404 Integration Process for Federal Aid Surface Transportation Project Memorandum of Understanding (NEPA/404 MOU), the Corps has coordinated with the Environmental Protection Agency, Region IX (EPA), and the United States Fish and Wildlife Service, Carlsbad (USFWS), to provide early input for this transportation project.

The Corps has coordinated with the California Department of Transportation (Caltrans) District 11, EPA and USFWS in the development of selection criteria and the identification of a range of alternatives to be evaluated in the draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR). The Corps concurs with the chosen selection criteria and range of alternatives to be carried forward for further analysis. Our concurrence is based on the resolution to comments received from both EPA and the USFWS regarding the No Action alternative, Existing Alignment alternative, and Southern Alignment alternative, and the clarification from Caltrans regarding this alternative made via e-mail dated March 4, 2010. In addition, the Corps recommends that Caltrans include a summary of the Lilac Road Alternative in the draft EIS/EIR, and provide clarification on why this alternative was not carried forward for further analysis. Caltrans has also stated that they are committed to working with resource agencies to avoid and/or minimize impacts to resources associated with the proposed Median as well as the Park and Ride facility, which are both elements of the Build Alternatives.

Figure 5.4-7
USACE NEPA 404 Concurrence on Alternatives and Selection Criteria Letter
(page 1 of 2)

-2-

The Corps would like to take this opportunity to acknowledge Caltrans continued commitment to interagency coordination. The Corps would also like to thank Caltrans for the opportunity to participate in the development of the SR-76 East, Selection Criteria and Range of Alternatives. We look forward to our continued participation in this project through the NEPA/404 MOU integration process . Should you have any questions regarding this letter, please contact Stephanie Hall of my staff at 213-452-3410 or via e-mail at Stephanie.J.Hall@usace.army.mil. Please refer to this letter and SPL-2004-01089-SJH in your reply.

Sincerely,

Mark D. Cohen
Deputy Chief, Regulatory Division

Cc:
Susan Sturges, U.S. EPA-Region IX
Janet Stuckrath, USFWS-Carlsbad
Linda Pardy, California Regional Water Quality Control Board-San Diego
Marian Fluharty, California Department of Fish and Game

Figure 5.4-7
USACE NEPA 404 Concurrence on Alternatives and Selection Criteria Letter
(page 2 of 2)

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-09B0003-10TA0388

APR 05 2010

Ms. Susanne Glasgow
California Department of Transportation District 11
4050 Taylor Street, MS 242
San Diego, California 92110

Subject: Criteria for the Selection of Project Alternatives and Range of Alternatives for the Proposed State Route 76 South Mission Road to Interstate 15 Widening and Realignment Project, San Diego County, California

Dear Ms. Glasgow:

This letter is in response to your request of November 16, 2009, for our concurrence on the selection criteria for project alternatives and the range of alternatives for the proposed State Route 76 South Mission Road to Interstate 15 (SR 76 East) project pursuant to the Memorandum of Understanding for the National Environmental Policy Act and Clean Water Act Section 404 for Federal Aid Surface Transportation Projects in California. This letter also serves to respond to your subsequent letter of January 20, 2010, requesting our review and comment on the range of alternatives for the proposed project pursuant to Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

We have coordinated with your agency, as well as the U.S. Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers, in the development of the selection criteria for project alternatives and the identification of the range of alternatives to be evaluated in the draft environmental impact statement/environmental impact report (DEIS/EIR). We are in agreement with the selection criteria and range of alternatives with the clarifications supplied in your subsequent emails dated March 3 and 29, 2010, in response to our comments on the alternatives submitted to you via email on January 8, 2010 and the additional comments relayed by Susan Sturges (EPA) on behalf of the resource agencies during a telephone call to you on March 25, 2010. However, we do recommend that Caltrans include a summary of the Lilac Road Alternative in the DEIS/EIR with a discussion of why it was not carried forward for further analysis in the DEIS/EIR. We acknowledge Caltrans' commitment to continue to work with the agencies to avoid and minimize project related impacts including impacts associated with the proposed park and ride and median widths.

TAKE PRIDE IN AMERICA

Figure 5.4-8
USFWS NEPA 404 Concurrence on Alternatives and Selection Criteria Letter
(page 1 of 2)

Ms. Susanne Glasgow (FWS-SDG-09B0003-10TA0388) 2

We appreciate the opportunity to participate in the development of the SR 76 East range of alternatives. We look forward to our continued coordination on the subject project. If you have any questions or comments pertaining to this letter, please contact Janet Stuckrath at (760) 431-9440, ext. 270.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor
U.S. Fish and Wildlife Service

cc:
Stephanie Hall, U.S. Army Corps of Engineers
Susan Sturges, U.S. Environmental Protection Agency
Linda Pardy, Regional Water Quality Control Board
Steve Juarez, California Department of Fish and Game

Figure 5.4-8
USFWS NEPA 404 Concurrence on Alternatives and Selection Criteria Letter
(page 2 of 2)

DEPARTMENT OF THE ARMY
Los Angeles District, Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

April 18, 2011

REPLY TO
ATTENTION OF:
Office of the Chief
Regulatory Division

Bruce April, Deputy District Director
North Coast Environmental Division
California Department of Transportation - District 11
4050 Taylor Street, MS-242
San Diego, California 92110

Subject: Concurrence on Identification of the Preferred Alternative, the Preliminary Least Environmentally Damaging Practicable Alternative, and Conceptual Mitigation Plan, State Route 76, South Mission to Interstate 15, Highway Improvement Project, San Diego County, California

Dear Mr. April:

This letter is in response to your request, dated March 7, 2011, for concurrence on identification of the Preferred Alternative, the Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA), and Conceptual Mitigation Plan for State Route 76, South Mission to Interstate 15, Highway Improvement Project, San Diego County, California. Our concurrence, as a signatory agency, is provided pursuant to the National Environmental Policy/Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects in California Memorandum of Understanding (NEPA/404 MOU).

The Corps has reviewed your request and supplemental information. We also appreciate the opportunity to provide early coordination and input in accordance with the NEPA/404 MOU. By transmittal of this letter, the Corps is providing our concurrence on your Preferred Alternative, Preliminary LEDPA, and Conceptual Mitigation Plan. In providing this concurrence, the Corps agrees that the Existing Northern Alignment Alternative is both the "Preferred Alternative" and the "Preliminary LEDPA". In addition, the "Vessels Mitigation Site" as presented in the "Conceptual Wetland Mitigation Plan", dated February 2011, contains sufficient suitable habitat, non-wetland waters, and wetland waters of the United States, to support creation/establishment, enhancement, and preservation opportunities that may arise from potential impacts incurred by the proposed project.

The Corps appreciates Caltrans' continued commitment to work closely with resource

Figure 5.4-9
USACE NEPA 404 Concurrence on Preferred Alternative/LEDPA Letter
(page 1 of 2)

-2-

agencies to further refine the design of this project and to avoid and minimize impacts to the maximum extent practicable. We look forward to continued coordination during the transportation planning process. If you have any questions, please contact Stephanie Hall of my staff at 213-452-3410 or via e-mail at Stephanie.J.Hall@usace.army.mil. Please refer to this letter and SPL-2009-00051-SJH in your reply.

Sincerely,

Mark D. Cohen
Deputy Chief, Regulatory Division

"Building Strong and Taking Care of People!"

CC via email:
Susan Sturges, Environmental Protection Agency- Region IX
Elizabeth Goldmann, Environmental Protection Agency- Region IX
Sally Brown, U.S. Fish & Wildlife Service
Stan Glowacki, National Marine Fisheries Service
Tim Dillingham, California Department of Fish & Game
Mike Porter, California Regional Water Quality Control Board

Figure 5.4-9
USACE NEPA 404 Concurrence on Preferred Alternative/LEDPA Letter
(page 2 of 2)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MAR 25 2011

Bruce April
California Department of Transportation
District 11, MS-242
4050 Taylor Street
San Diego, California 92110-2737

Subject: Agreement on Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) for the State Route 76 (SR 76) Corridor Project (South Mission to Interstate 15)

Dear Mr. April:

The U.S. Environmental Protection Agency (EPA) has reviewed the California Department of Transportation (Caltrans) February 28, 2011 letter requesting agreement on the preliminary least environmentally damaging practicable alternative (LEDPA) developed for the State Route 76 (SR 76), South Mission to Interstate 15, Improvement Project in San Diego County, California. EPA provides our early input for this transportation project pursuant to the National Environmental Policy Act/Clean Water Act Section 404 Integration Process Memorandum of Understanding (NEPA/404 MOU).

EPA agrees that the Existing Alignment Alternative is the preliminary LEDPA based on our review of information and attachments provided in your February 28, 2011 submittal. The Southern Alignment Alternative would likely result in far greater indirect impacts to waters of the United States when compared to the indirect impacts of the Existing Alignment Alternative.

EPA will continue to be available through the NEPA/404 MOU coordination process to provide feedback on refinements of the conceptual mitigation plan and to further assist on minimizing project impacts to environmental resources. EPA will provide comments on the Final Environmental Impact Statement, as well as the U.S. Army Corps of Engineers Final Public Notice for the Clean Water Act Section 404 permit when those documents are published for public review.

Thank you for requesting our agreement on the preliminary LEDPA. If you have any questions or comments, please contact Susan Sturges, the lead reviewer for this

Figure 5.4-10
USEPA Concurrence on Preferred Alternative/LEDPA Letter
(page 1 of 2)

project, at 415-947-4188 or Sturges.Susan@epa.gov, or contact Elizabeth Goldmann of the EPA Region 9 Wetlands Office at 415-972-3398 or Goldmann.Elizabeth@epa.gov.

Sincerely,

Connell Dunning, Transportation Team Supervisor
Environmental Review Office

CC via email:
John Chisholm, California Department of Transportation
Sally Brown, U.S. Fish and Wildlife Service
Stephanie Hall, U.S. Army Corps of Engineers
Tim Dillingham, California Department of Fish and Game
Mike Porter, California Regional Water Quality Control Board San Diego Region

2

Figure 5.4-10
USEPA Concurrence on Preferred Alternative/LEDPA Letter
(page 2 of 2)

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-09B0003-11TA0290

MAR 22 2011

Mr. Bruce April
Deputy District Director, District 11
California Department of Transportation
Environmental Planning
4050 Taylor Street
San Diego, California 92110

Subject: Alternatives for the State Route 76 South Mission to Interstate 15 Highway Improvement Project, San Diego County, California

Dear Mr. April:

We have reviewed your request dated February 28, 2011, for our agreement on the Preferred Alternative and Preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) for the State Route 76 (SR-76) South Mission to Interstate 15 (I-15) Highway Improvement Project, pursuant to the National Environmental Policy Act/Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects in California Memorandum of Understanding (NEPA/404 MOU). The California Department of Transportation (Caltrans) has assumed Federal Highway Administration's responsibilities with regard to environmental review, consultation, and NEPA compliance for this project in accordance with Section 6005 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 2005, as described in the NEPA Delegation Pilot Program Memorandum of Understanding between FHWA and Caltrans (effective July 1, 2007), and codified in 23 U.S.C. 327(a)(2)(A).

We appreciate the extensive and early coordination that has occurred on this project, including your consideration of the numerous concerns that the resource agencies have raised with regard to the indirect and edge effects that the Southern Alignment Alternative would have on proposed reserve lands, sensitive habitats, and wildlife connectivity. By transmittal of this letter, we provide our agreement that the Existing Alignment Alternative is the Preferred Alternative and Preliminary LEDPA for the SR-76 South Mission to I-15 Highway Improvement Project.

For clarification purposes, our agreement should not be construed as support for all of the proposed alignment features. We request that the resource agencies be given further opportunity to review and comment on the location and extent of the park and ride and frontage roads, as well as design plans for the proposed wildlife connectivity features. We appreciate Caltrans commitment to continue to work closely with the resource agencies to further refine the design

TAKE PRIDE IN AMERICA

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 1 of 9)

Mr. Bruce April (FWS-SDG-09B0003-11TA0290) 2

of the SR-76 South Mission to I-15 Highway Improvement Project to avoid and minimize impacts to sensitive species and habitats.

Thank you for the opportunity to participate in the transportation planning process, we look forward to our continued coordination in these matters. If you have any questions regarding this letter, please contact Sally Brown of this office at (760) 431-9440, extension 278.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor

Enclosure

cc:
Stephanie Hall, Corps of Engineers, Los Angeles, CA
Susan Sturges, Environmental Protection Agency, San Francisco, CA
Elizabeth Goldmann, Environmental Protection Agency, San Francisco, CA
Stan Glowacki, National Marine Fisheries Service, Long Beach, CA

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 2 of 9)

ENCLOSURE

U. S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011
(760) 431-9440
FAX (760) 431-9618

California Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, California 92123
(858) 467-4201
FAX (858) 467-4299

In Reply Refer To:
FWS/CDFG-09B0003-11TA0081

NOV 1 5 2010

Mr. Bruce April
California Department of Transportation
District 11
4050 Taylor Street, M.S. 242
San Diego, California 92110

Subject: Mitigation for State Route 76 – Highway Improvement Projects and *TransNet Environmental Net Benefit*, San Diego County, California

Dear Mr. April:

The California Department of Fish and Game (Department) and the U.S. Fish and Wildlife Service (Service), hereafter collectively referred to as the Wildlife Agencies, have reviewed your letter, dated November 1, 2010, requesting concurrence on the proposed mitigation and *TransNet Environmental Net Benefit* for the proposed State Route 76 (SR-76) project.

Over the past year, we have worked with you to develop a mitigation package for the SR-76 east project as well as to identify measures to fulfill the Environmental Net Benefit that was required as part of the *TransNet* Ordinance. There are currently two alignments being evaluated for the SR-76 east project. In our opinion, the Existing Alignment Alternative is the biologically superior alternative. We have concerns with the Southern Alignment Alternative and its direct and indirect effects to proposed reserve lands, sensitive habitats, including waters of the United States, and wildlife connectivity. The mitigation package for each of these alternatives is summarized in your letter (Tables 1 and 2). We concur that the mitigation as proposed (see enclosure Table 1 and 2) for the Existing Alignment Alternative will meet Caltrans' mitigation obligations for impacts to sensitive species, loss of habitat, and wildlife connectivity. If the Southern Alignment Alternative is chosen, then additional measures may be needed to offset impacts to the federally listed coastal California gnatcatcher (*Polioptila californica californica*) and its designated critical habitat. Therefore, we recommend reserving one of the parcels (32 acres) at the proposed Jeffries Ranch acquisition site for this purpose in the event the Southern Alignment Alternative is chosen. If the Existing Alignment Alternative is chosen, then this parcel can be added to the overall Environmental Net Benefit of the site.

As you summarized in your letter, the *TransNet* ordinance required the SR-76 project to provide a "net-benefit" to species and habitat beyond traditional mitigation. To meet this obligation, you are proposing to purchase two properties (Rancho Lilac and Jeffries Ranch) as well as to incorporate wildlife connectivity features in both the middle and eastern sections of SR-76. A

TAKE PRIDE IN AMERICA

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 3 of 9)

Mr. Bruce April (FWS/CDFG-09B0003-11TA0081) 2

resource management plan will be prepared for each of these properties and a long-term endowment will be established to fund the maintenance of these "net benefit" properties. The wildlife connectivity features are depicted in figures 3.20-6a and 3.20-6b (see enclosure). It is our expectation that culverts at EB1 (WAC1), EB2 (WAC2), EB4 (WAC10), EB5 (WAC 11) EB6 (WAC 13) and EC44 (WAC15) will have an openness ratio of at least 0.1 and that maintenance funding will be secured to maintain the wildlife connectivity features, including directional fencing and culverts, such that wildlife connectivity in the project area is not lost over time. In addition, we recommend that Caltrans conduct post-project monitoring on the effectiveness of the wildlife connectivity features to inform decision-making for future projects. Provided these conditions can be met with regards to the wildlife connectivity features, we concur that these measures will provide a net environmental benefit for the SR-76 highway improvement projects.

The Wildlife Agencies appreciate the opportunity to comment on this proposal and look forward to our continued coordination. If you should have any questions regarding this letter, please contact Tim Dillingham at the Department (858-467-4204) and Sally Brown or Susan Wynn at the Service (760-431-9440).

Sincerely,

Karen A. Goebel
Assistant Field Supervisor
U. S. Fish and Wildlife Service

Stephen M. Juarez
Environmental Program Manager
California Department of Fish and Game

Enclosure

cc:
Keith Greer, SANDAG

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 4 of 9)

Table 1. Mitigation Sites and Compensation

Mitigation Sites	Existing Alignment Available Mitigation acres	Existing Alignment Alternative		Southern Alignment Available Mitigation Acres*	Southern Alignment Alternative	
		Acres Needed for Permanent Impacts:	Acres needed for Indirect Impacts		Acres needed for Permanent Impacts	Acres needed for Indirect Impacts
Riparian Mitigation Sites						
Vessels	110.6 = 87.7 creation; 22.9 restoration.			91.86 = 68.96 creation; 24.9 restoration		
Tabata	22.7 ac= 7.3 creation; 15.4 restoration			22.7 ac= 7.3 creation; 15.4 restoration		
Subtotal:	**133.3 =** 95 creation; 38.3 restoration.	**96.69 =** 32.14 creation; 64.55 restoration	**36.97**	**114.56 =** 76.26 creation; 40.3 restoration	**45.91 =** 15.27 creation; 30.64 restoration	**79.59**
Total:	**133.3**	**Total riparian acres needed: 133.66**		**114.56**	**Total riparian acres needed: 125.5**	
Upland Mitigation Sites						
Vessels:						
Nonnative grassland (NNG)	49.4			43.9		
Groves:						
Coastal Sage Scrub (CSS)	55.89			55.89		
Nonnative grassland	12.69			12.69		
Coast Live Oak Woodland (CLOW)	9.67			9.67		
Subtotal :		CSS= 13.15, NNG= 26.88, CLOW= 5.34	CSS=4.69, CLOW= 1.36		CSS=6.37, NNG=25.13, CLOW=1.78	CSS=16.42, CLOW=0.76
Total:	**CSS = 55.89 NNG = 62.09 CLOW = 9.67**	**Total upland acres needed: CSS = 17.84 NNG = 26.88 CLOW = 6.7**		**CSS = 55.89 NNG = 45.59 CLOW = 9.67**	**Total upland acres needed: CSS = 22.79 NNG = 25.13 CLOW = 2.54**	

*If the Southern Alignment is chosen, approximately 7.17 acres of the Vessels mitigation site would be permanently lost to road development, 3.49 acres would incur temporary impacts, and 24.4 acres would be indirectly impacted. Of this, approximately 18.74 acres are proposed creation and restoration activities.

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 5 of 9)

Table2. Mitigation for Impacts to Critical Habitat

Mitigation Sites	Existing Alignment Critical Habitat Acres Available		Existing Alignment Alternative: CH permanent and Indirect Impacts (acres)	Existing Alignment Alternative: Mitigation Ratios	Southern Alignment Critical Habitat Acres Available		Southern Alignment Alternative: CH permanent and Indirect Impacts (acres)	Southern Alignment Alternative: Mitigation Ratios
Riparian Mitigation Sites								
Vessels[1]	*162 ARTO*[2] *162 LBV* *87.5 SWWF*		*196 ARTO* *ARTO CH wetland/riparian perm impacts = 36.25* *CH Upland impacts (including agricultural land) = 41.73* *CH Indirect impacts=118.13*	*ARTO CH Wetland/riparian impacts @ 3:1 = 96.69.* *123.58 available mitigation acres remaining.* *CH Upland impacts @1:1 = 41.73.* *81.85 available mitigation acres remaining* *CH Indirect impacts = 118.13* *0.69 :1 ratio*[3]	*130.43 ARTO*[3] *130.43 LBV* *79.67 SWWF*		*264.9 ARTO* *ARTO CH wetland/riparian perm impacts = 15.37* *CH Upland impacts (including agricultural land) = 75.02* *CH Indirect impacts = 174.52*	*ARTO CH Wetland/riparian permanent impacts @ 3:1 = 46.11.* *142.59 available mitigation acres remaining.* *CH Upland impacts @ 1:1 = 75.02* *67.57 available mitigation acres remaining* *CH Indirect impacts = 174.52* *0.39:1 ratio*[3]
Tabata	*22.7 ARTO* *22.7 LBV* *14.6 SWWF*				*22.7 ARTO* *22.7 LBV* *14.6 SWWF*			
Groves	*35.57 ARTO*		*136.45 LBV* *LBV CH perm impacts = 63.15* *CH Indirect impacts= 73.3*	*LBV CH impacts @ 2:1 = 126.3* *58.4 available mitigation acres remaining.* *CH Indirect impacts = 73.3* *0.8 :1 ratio*[4]	*35.57 ARTO*		*100.8 LBV* *LBV CH perm impacts = 33.87* *CH Indirect impacts = 66.97*	*LBV CH impacts @ 2:1 = 67.74* *85.39 available mitigation acres remaining.* *CH Indirect impacts = 66.97* *1.27 :1 ratio*
Total available	***220.27 ARTO*** ***184.7 LBV*** ***102.1 SWWF***		*110.28 SWWF* *SWWF CH perm impacts = 37.13* *CH Indirect impacts = 73.15*	*SWWF impacts @ 2:1= 74.26* *27.84 available mitigation acres remaining.* *CH Indirect impacts = 73.15* *0.38 :1 ratio*[3,4]	***188.7 ARTO*** ***153.13 LBV*** ***94.27 SWWF***		*82.84 SWWF* *SWWF CH perm impacts = 16.36* *CH Indirect impacts = 66.48*	*SWWF CH impacts @ 2:1 = 32.72.* *61.55 available mitigation acres remaining.* *CH Indirect impacts= 66.48* *0.92 :1 ratio*
Upland Mitigation Sites								
Tabata	*19.7 CAGN*		*48.97 CAGN* *Total CH perm impacts = 45.33* *CH Indirect impacts = 3.64*	*CAGN CH perm impacts @2:1 = 90.66. 7.29 available mitigation acres remaining.* *CH Indirect impacts = 3.64* *2:1 ratio*	*19.7 CAGN*		*69.35 CAGN* *Total CH perm impacts = 52.94* *CH Indirect impacts = 16.41*	*CAGN CH perm impacts @ 2:1 = 105.88.* *0 available mitigation acres remaining (-7.93).* *CH Indirect impacts@ 1:1 = 16.41.* *24.34 acres offset by wildlife fencing and crossings.*[5]
Groves	*55.89 CAGN*				*55.89 CAGN*			
Total available	***97.95 CAGN***				***97.95 CAGN***			

[1]The Vessels property mitigation acreage differs for the Existing and Southern Alignments. If the Southern Alignment is chosen, approximately 7.17 acres of arroyo toad proposed critical habitat and least Bell's vireo critical habitat within the Vessels mitigation site would be permanently lost to road development, 3.49 acres would incur temporary impacts, and 24.4 acres would be indirectly impacted. Approximately 1.09 acres of southwestern willow flycatcher critical habitat would be permanently impacted, 0.55 acres would incur temporary impacts, and 6.74 acres would be indirectly impacted.
[2]Critical Habitat is proposed for Arroyo Toad and San Diego Ambrosia.
[3] Potentially supplemented by 11.89 acres of ARTO critical habitat at Jeffries Ranch if Southern Alignment Alternative is selected. Additional mitigation for indirect impacts includes wildlife fencing and crossings along the project.
[4] 22.9 acres of critical habitat for arroyo toad, 22.9 acres for vireo and 11 acres for willow flycatcher at Vessels will be restored to suitable riparian habitat, which will help offset these indirect impacts.
[5] Potentially supplemented by 50.77 acres of CAGN critical habitat at Jeffries Ranch if Southern Alignment is selected.

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 6 of 9)

Table 2 continued - Impacts to San Diego Ambrosia and Proposed Critical Habitat

San Diego Ambrosia Population	Existing Alignment Impacts (acres)			Southern Alignment Impacts (acres)		
Impact Type	Permanent	Temporary	Indirect	Permanent	Temporary	Indirect
	<0.01	<0.01	0	0	0	0
Mitigation	**28:1 ratio = 0.28**					
San Diego Ambrosia Proposed Critical Habitat						
Impact Type	Permanent	Temporary	Indirect	Permanent	Temporary	Indirect
	1.50	0.60	2.06	0	0	0
Mitigation	12.4 :1 = 18.6		1:1 = 2.06			
Mitigation Total	**20.89 (Includes 0.28 acres of occupied habitat)**					

Mitigation for permanent impacts to ambrosia populations (<0.01 acres) and permanent and indirect impacts to proposed critical habitat (3.56 acres) will be in the form of preservation at the Groves mitigation site, which has 0.28 acres of occupied ambrosia habitat and 20.89 acres of proposed critical habitat. Temporary impacts to proposed critical habitat will be restored on site.

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter

(page 7 of 9)

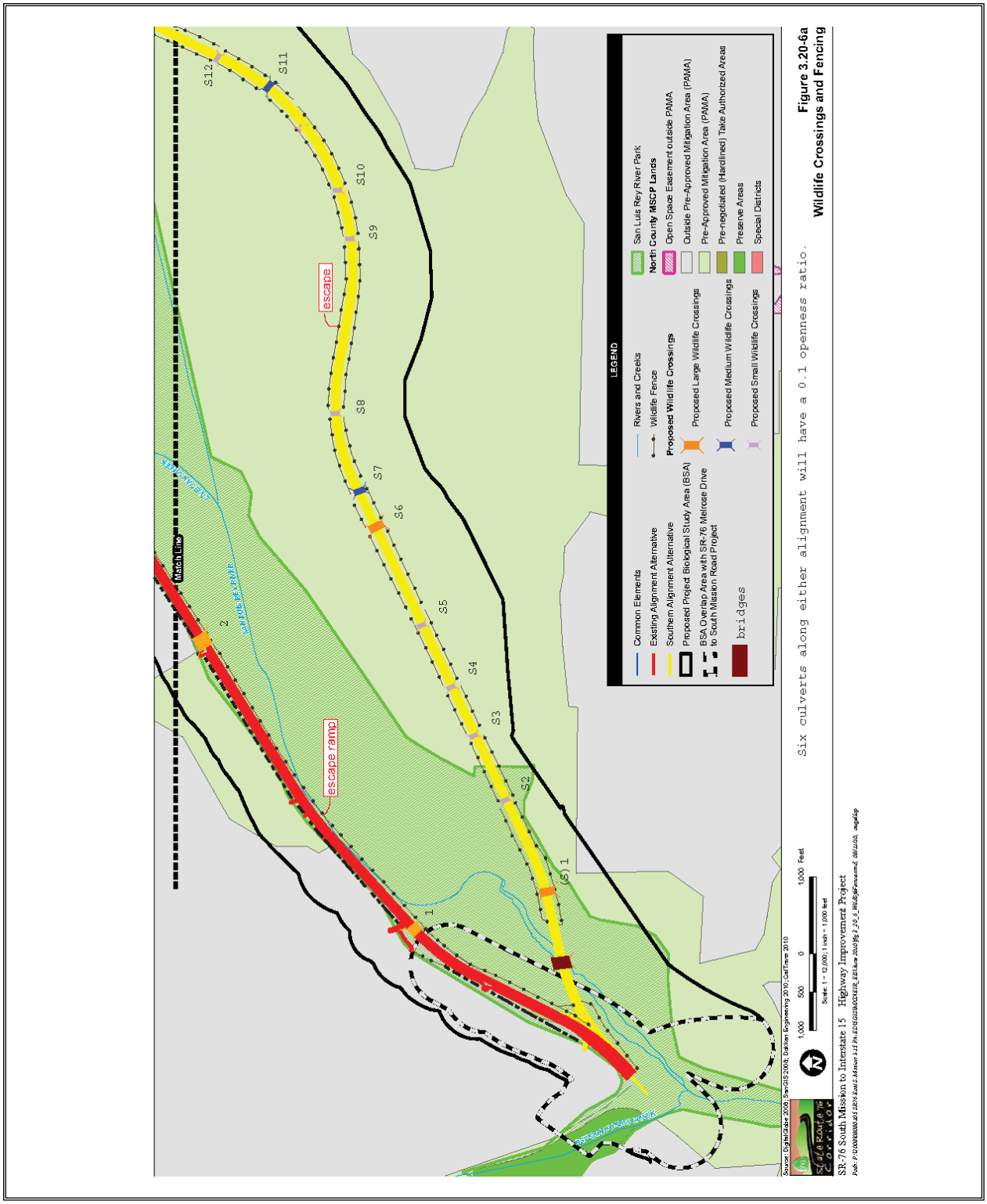

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter
(page 8 of 9)

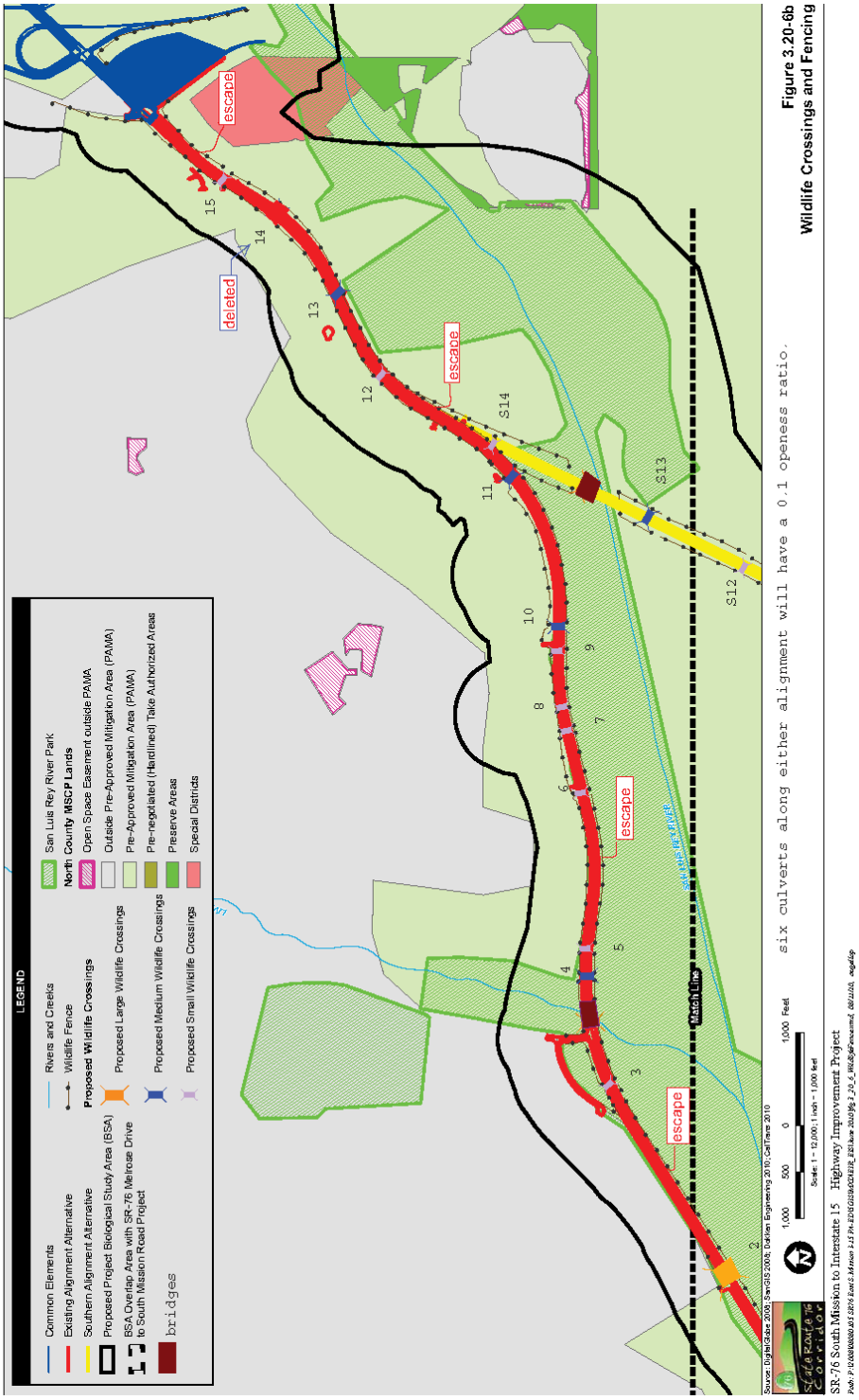

Figure 5.4-11
USFWS Concurrence on Preferred Alternative/LEDPA Letter
(page 9 of 9)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

In response refer to:
T/SWR/2011/01233: SCG

MAR 29 2011

Mr. Bruce April
Deputy District Director, District 11
California Department of Transportation
4050 Taylor Street
San Diego, California 92110

Dear Mr. April:

NOAA's National Marine Fisheries Service (NMFS) has reviewed California Department of Transportation's (Caltrans) February 28, 2011, request for concurrence on the preliminary Least Environmentally Damaging Practicable Alternative (LEDPA) for the State Route-76 South Mission Road to Interstate-15 Highway Improvement Project (Project). Caltrans' request is pursuant to the Memorandum of Understanding for the National Environmental Policy Act and Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects in California, of which NMFS is a signatory. This project occurs adjacent to the San Luis Rey River, which is within the endangered Southern California Distinct Population Segment of steelhead (*Oncorhynchus mykiss*), but is not designated as critical habitat for this species.

NMFS appreciates the early coordination that has occurred on the Project, including Caltrans' consideration of NMFS' concerns regarding effects that the Southern Alignment Alternative would have on the San Luis Rey River. By transmittal of this letter, NMFS provides concurrence that the Existing Alignment Alternative is the Preferred Alternative and the preliminary LEDPA for the Project.

NMFS appreciates this opportunity to coordinate with Caltrans on the proposed project. Please contact Stan Glowacki at (562) 980-4061 or via email at Stan.Glowacki@noaa.gov if you have any questions concerning this letter, or if you require additional information.

Sincerely,

for Penny Ruvelas
Southern California Supervisor
for Protected Resources Division

cc: Mary Larson, CDFG
Copy to File # 151422SWR2010PR00053

Figure 5.4-12
NOAA - National Marine Fisheries Service Concurrence on Preferred Alternative/LEDPA Letter
(page 1 of 1)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

June 8, 2011

In response refer to:
I/SWR/2011/01795: KEM

Kim T. Smith
Environmental Stewardship Branch
California Department of Transportation, District 11
4050 Taylor Street
San Diego, California 92110

Dear Ms. Smith:

Thank you for your May 19, 2011, letter requesting initiation of consultation with NOAA's National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA). NMFS has reviewed the letter and additional information package provided by the California Department of Transportation (Caltrans) regarding the State Route 76 (SR-76) South Mission to Interstate 15 (I-15) Highway Project (project), San Diego County, California. This response also serves as consultation under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act of 1934 (FWCA), as amended. Caltrans is proposing to widen and realign a 5.2-mile-long section of SR-76 and improve the SR-76/I-15 interchange. This project is of concern to NMFS because the San Luis Rey River is within the endangered Southern California Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*). The San Luis Rey River is not designated critical habitat for this species.

The proposed project would consist of constructing additional eastbound and westbound lanes, separated by a 30-foot-wide median with a concrete barrier, to create a four-lane highway within the existing highway alignment. Left-turn channelization, median openings, and additional traffic signals would also be constructed at key intersections. A Park and Ride facility would be constructed near the SR-76/I-15 interchange, and three-lane on-ramps to I-15 would be constructed to improve the interchange. Other highway improvements include bioswale drainage channels and runoff detention basins that would be incorporated into the proposed project to minimize the quantity and toxicity of highway runoff that could potentially enter the San Luis Rey River. Implementation of the project would result in removal of 32.65 acres of riparian, wetland and aquatic habitat and temporary disturbance to an additional 10.6 acres of riparian and wetland habitat. These impacts would be mitigated through creation of 7.3 acres of riparian habitat and 15.4 acres of riparian habitat restoration at the Tabata site. At the Vessels site, 87.7 acres of riparian habitat would be created, and 22.9 acres of riparian habitat would be restored.

Figure 5.4-13
NOAA - National Marine Fisheries Confirmation of Section 7 Consultation
(page 1 of 3)

2

There is no designated critical habitat for the endangered Southern California steelhead DPS in the project area. In addition, there have been no documented detections of steelhead within or adjacent to the project area. One adult steelhead was observed in 2007, 6 river miles below the downstream end of the project area and below a partial barrier to migration.

Caltrans determined that the proposed project is not likely to adversely affect steelhead or critical habitat for this species within the San Luis Rey River, and requested NMFS' concurrence with this determination. After carefully reviewing the additional information provided, NMFS concurs with Caltrans' determination for the following reasons:

1. No water diversion or dewatering of aquatic habitat is required for the proposed action because all construction will take place outside of the active channel and away from flowing water. Thus, direct effects to steelhead are not expected.

2. Bioswales and detention basins will be constructed to minimize inputs of runoff from the highway into the San Luis Rey River. Caltrans will treat 81% of roadway runoff from the highway and 54% of roadway runoff from the interchange, where no such treatment presently exists. These facilities are expected to minimize the toxicity of highway runoff that could potentially enter the river. Thus, indirect effects to steelhead and aquatic habitat from highway runoff are expected to be discountable.

3. The majority of SR-76 within the project area is several hundred feet away from the San Luis Rey River channel. Thus, adverse impacts to the river channel, the floodplain, and floodplain connectivity from the proposed action are not expected.

4. Impacts to native riparian vegetation within the action area are expected to be minimized due to the implementation of a riparian and wetland mitigation plan at the Vessels and Tabata sites. The plan will restore approximately 95 acres of riparian habitat and create 38.3 acres of riparian habitat, whereas the proposed action will permanently remove 33 acres of riparian vegetation in primarily upland areas. Thus, impacts to riparian vegetation within the action area are expected to be discountable.

5. Best management practices will be implemented during construction to minimize impacts on steelhead and aquatic habitat in the San Luis Rey River. These include sediment-control measures to minimize erosion and impacts on water quality, a stormwater management and pollution prevention plan, measures to prevent fresh concrete from entering the river channel, and fueling and maintenance of heavy machinery in areas away from the river channel and sensitive habitats.

This concludes section 7 consultation in accordance with 50 CFR 402.13(a) for the proposed action. Consultation must be reinitiated where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and: (1) if new information becomes available revealing effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) if the agency action is subsequently modified in a manner that causes an effect to listed species or

Figure 5.4-13
NOAA - National Marine Fisheries Confirmation of Section 7 Consultation
(page 2 of 3)

3

critical habitat that was not considered; or (3) if a new species or critical habitat is designated that may be affected by this action.

Pursuant to FWCA, NMFS has no comments to provide.

Please contact Kristin Mull at (562) 980-3265 or via email at Kristin.Mull@noaa.gov if you have any questions concerning this letter, or if you require additional information.

Sincerely,

for Rodney R. McInnis
Regional Administrator

cc: Mary Larson, CDFG
Karen Goebel, USFWS Carlsbad Office
Meris Bantilan-Smith, Corps of Engineers
Copy to File #151422SWR2010PR00053

Figure 5.4-13
NOAA - National Marine Fisheries Confirmation of Section 7 Consultation
(page 3 of 3)

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-09B0003-10SL0810

JUN 28 2010

Kim T. Smith
Branch Chief
Environmental Resource Studies
Department of Transportation
4050 Taylor Street
San Diego, California 92110

Attention: Rush Abrams, Associate Environmental Planner

Subject: Request for a List of Proposed, Threatened, or Endangered Species Potentially Occurring in the Vicinity of the State Route 76 South Mission to I-15 Highway Improvement Project, San Diego County, California

Dear Ms. Smith:

This letter is in response to your request, received by our office on June 24, 2010, for information on federally endangered, threatened, proposed, and candidate species that may occur in the vicinity of the State Route 76 (SR-76) South Mission to Interstate 15 (I-15) Highway Improvement Project. The project site is located along SR-76 between South Mission Road and I-15 in San Diego County, California. To assist you in evaluating the potential occurrence of federally listed endangered, threatened, proposed, and candidate species that may occur in the vicinity of the proposed action, we are providing the enclosed list.

Because we do not have site-specific information for the proposed project, we recommend that you seek assistance from a biologist familiar with the habitat conditions and associated species in and around the project site to assess the actual potential for direct, indirect, and cumulative impacts likely to result from the proposed activity. We also suggest that you contact the California Department of Fish and Game regarding State-listed and sensitive species that may occur within the project area. Please note that State-listed species are protected under the provisions of the California Endangered Species Act.

As a reminder, if a proposed project is authorized, funded, or carried out by a Federal agency and may affect a federally listed species, then section 7 consultation pursuant to the Endangered Species Act of 1973 (Act), as amended, is required. If a proposed project does not involve a Federal agency, but is likely to result in the take of a listed animal species, then the project proponent should apply for an incidental take permit, pursuant to section 10 of the Act.

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Figure 5.4-14
Section 7 Species List from USFWS
(page 1 of 3)

Kim T. Smith (FWS-SDG-09B0003-10SL0810) 2

Please note that due to out-of-date data on the U. S. Fish and Wildlife Service Critical Habitat Portal, the Carlsbad Fish and Wildlife Office is now hosting all critical habitat GIS data within our jurisdictional area on our website at http://www.fws.gov/carlsbad. Select the GIS DATA link to access current critical habitat layers.

Should you have any questions regarding the species listed or your responsibilities under the Act, please contact Sally Brown of this office at (760) 431-9440, extension 278.

Sincerely,

Sally Brown

for Karen A. Goebel
Assistant Field Supervisor

Enclosure

Figure 5.4-14
Section 7 Species List from USFWS
(page 2 of 3)

Federally Endangered, Threatened, Proposed, and Candidate Species and Critical Habitat that May Occur in the Vicinity of the the State Route 76 South Mission to I-15 Highway Improvement Project, San Diego County, California

June 24, 2010

Common Name	Scientific Name	Federal Status	Critical Habitat in Vicinity
Plants			
San Diego ambrosia	*Ambrosia pumila*	endangered	present
Amphibians			
arroyo toad	*Anaxyrus (=Bufo) californicus*	endangered	present
Birds			
coastal California gnatcatcher	*Polioptila californica californica*	threatened	present
Least Bell's vireo	*Vireo bellii pusillus*	endangered	present
southwestern willow flycatcher	*Empidonax traillii extimus*	endangered	present

Figure 5.4-14
Section 7 Species List from USFWS
(page 3 of 3)

"Pratt, Trevor"
<TPratt@parks.ca.gov>
03/29/2010 09:19 AM

To <karen.crafts@dot.ca.gov>
cc "Lindquist, Natalie" <nlindquist@parks.ca.gov>
bcc
Subject 11-SD-76, PM 12.4/17.6 11-SD-15, PM R46.1/R47.1 EA 257110

History: This message has been forwarded.

Dear Ms. Crafts

Thank you for submitting your report on State Route 76 Highway Improvement Project South Mission Road to Interstate 15, Filing of Historic Property Survey Report & Completion of Section 106 Compliance in Accordance with Statewide Programmatic Agreement. In future correspondences, if necessary, please refer to project FHWA100218A.

I have no objections to your findings. Thank you for seeking my comments and for considering historic properties in planning your project.

Sincerely,

Trevor Pratt
Assistant State Archaeologist
Office of Historic Preservation
Phone: (916) 651-0831

Figure 5.4-15
SHPO Completion of Section 106 Compliance
(page 1 of 1)

"Pratt, Trevor"
<TPratt@parks.ca.gov>
07/27/2011 02:26 PM

To Karen C Crafts <karen_c_crafts@dot.ca.gov>, Kevin Hovey <kevin_hovey@dot.ca.gov>, Koji Tsunoda <koji_tsunoda@dot.ca.gov>
cc "Lindquist, Natalie" <nlindquist@parks.ca.gov>
bcc
Subject SHPO Notification: SR 76 Vessel Ranch Biological Mitigation Site

Dear Kevin, Karen and Koji,

Thank you for your notification of a finding of No Adverse Effects with Standard Conditions-ESA and monitoring for the Second Supplemental HPSR for SR 76 Vessel Ranch Biological Mitigation Site. Please be aware that unilateral determinations of eligibility and categorical treatments as mentioned in Attachment 4 of the HPSR (Treatment Plan for Buried Cultural Resources) should be enacted through some kind of agreement document, as such I cannot concur in that treatment plan for the given scope of this project, however I have no objection to your official finding. Thank you for considering historic properties as part of the planning process

Sincerely,

Trevor Pratt
Assistant State Archaeologist
Office of Historic Preservation
Phone: (916) 445-7017

Figure 5.4-16
SHPO Findings on Standard Conditions for Vessels Mitigation Site
(page 1 of 1)

Federal Register / Vol. 75, No. 171 / Friday, September 3, 2010 / Notices 54145

estimated to average 10 to 30 minutes per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements which have subsequently changed; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

The ICR provides a detailed explanation of the Agency's annual estimate, which is only briefly summarized here:

Estimated total number of potential respondents: 5,800.

Frequency of response: Annual.

Estimated total average number of responses for each respondent: 1.

Estimated total annual burden hours: 1,248 hours.

Estimated total annual costs: $82,423.88. This does not include an estimated burden cost of $61,552.96 and an estimated cost of $100,000 for capital investment or maintenance and operational costs.

Are there changes in the estimates from the last approval?

Yes. Hours were removed for the certification program collection include in the previous ICR. Fewer hours for EPA are anticipated for the survey work due to a decreased level of sophistication in the analysis and decreased effort being needed to solicit survey responses. More hours were added for teachers completing the educator survey and administering the student survey. Finally, registering such a large number of teachers has resulted in more hours needed at EPA. Hours and burden for educators is about the same; hours for students has also decreased significantly. The bottom line burden hours increased along with the total cost.

What is the next step in the process for this ICR?

EPA will consider the comments received and amend the ICR as appropriate. The final ICR package will then be submitted to OMB for review and approval pursuant to 5 CFR 1320.12. At that time, EPA will issue another **Federal Register** notice pursuant to 5 CFR 1320.5(a)(1)(iv) to announce the submission of the ICR to OMB and the opportunity to submit additional comments to OMB. If you have any questions about this ICR or the approval process, please contact the technical person listed under **FOR FURTHER INFORMATION CONTACT.**

Dated: August 26, 2010.

Kristinn Vazquez,

Acting Director, Stratospheric Protection Division, Office of Air and Radiation.

[FR Doc. 2010–22072 Filed 9–2–10; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–8992–5]

Environmental Impacts Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–1399 or *http://www.epa.gov/compliance/nepa/.*

Weekly receipt of Environmental Impact Statements

Filed 08/23/2010 Through 08/27/2010

Pursuant to 40 CFR 1506.9.

Notice

In accordance with Section 309(a) of the Clean Air Act, EPA is required to make its comments on EISs issued by other Federal agencies public. Historically, EPA has met this mandate by publishing weekly notices of availability of EPA comments, which includes a brief summary of EPA's comment letters, in the **Federal Register**. Since February 2008, EPA has been including its comment letters on EISs on its Web site at: *http://www.epa.gov/compliance/nepa/eisdata.html.* Including the entire EIS comment letters on the Web site satisfies the Section 309(a) requirement to make EPA's comments on EISs available to the public. Accordingly, on March 31, 2010, EPA discontinued the publication of the notice of availability of EPA comments in the **Federal Register.**

EIS No. 20100341, Draft EIS, FHWA, WA, Cattle Point Road Realignment Project, To Maintain Vehicular, Bicycle, and Pedestrian Road Access, San Juan Island National Historical Park and Cattle Point Natural Resources Conservation Area, San Juan County, WA, *Comment Period Ends:* 11/01/2010, *Contact:* Peter Dederich 360–348–2223.

EIS No. 20100342, Draft EIS, FHWA, CA, Interstate 80/Interstate 680/State Route 12 Interchange Project, Proposal to Ease Traffic Congestions, Accommodate Projected Growth, and Improve Safety, Solano County, CA, *Comment Period Ends:* 10/18/2010, *Contact:* Lanh Phan 916–498–5046.

EIS No. 20100343, Draft EIS, BLM, NV, Tonopah Solar Energy Crescent Dunes Solar Energy Project, a 7,680-Acre Right-of-Way (ROW) on Public Lands to Construct a Concentrated Solar Thermal Power Plant Facility, Nye County, NV, *Comment Period Ends:* 10/18/2010, *Contact:* Timothy Coward 775–482–7830.

EIS No. 20100344, Final EIS, TVA, TN, Douglas and Nolichucky Tributary Reservoirs Land Management Plan, Implementation, Cocke, Greene, Hamblen, Jefferson and Sevier Counties, TN, *Wait Period Ends:* 10/04/2010, *Contact:* Amy Henry 865–632–4045.

EIS No. 20100345, Draft EIS, BR, CA, Upper Truckee River Restoration and Golf Course Reconfiguration Project, To Restore Natural Geomorphic Ecological Process, Lake Tahoe, EL Dorado County, CA, *Comment Period Ends:* 11/01/2010, *Contact:* Doug Kleinsmith 916–978–5034.

EIS No. 20100346, Draft EIS, BLM, 00, Jarbidge Draft Resource Management Plan, Implementation, Elmore, Owy Lee, and Twin Falls Counties in South-Central, ID and Elko County in Northern, CA, *Comment Period Ends:* 11/30/2010, *Contact:* Richard Vander 208–736–2380.

EIS No. 20100347, Draft EIS, FHWA, CA, CA–76 South Mission road to Interstate 15 Highway Improvement Project, Proposes to Widen and Realign/a Two Lane Highway, San Diego County, CA, *Comment Period Ends:* 11/01/2010, *Contact:* Cesar Perez 916–498–5065.

EIS No. 20100348, Final EIS, FERC, ID, Swan Falls Hydroelectric Project, Application for a New License for the 25-megawatt Hydroelectric Facility (FERC Project No. 503–048), Snake River, Ada and Owyhee Counties, ID, *Wait Period Ends:* 10/04/2010, *Contact:* Mary O'Driscoll 1–866–208–3372.

EIS No. 20100349, Draft Supplement, FHWA, WI, Wisconsin Highway Project, Mobility Motorized and Nonmotorized Travel Enhancements, Updated Information on New Alternatives, and Evaluates a Staged Improvement, US18/151 (Verona Road) and the US 12/14 (Beltine) Corridors, Dane County, WI, *Comment Period Ends:* 10/29/2010, *Contact:* Johnny Gerbitz 608–829–7500.

Figure 5.4-17
SR-76 Draft EIR/EIS Published in the Federal Register
(page 1 of 1)

FALLBROOK/BONSALL VILLAGE NEWS THEVILLAGENEWS.COM PAGE A-17

protect San
's watersheds

ıt to sell rain barrel
Village Square

buy additional rain barrels, can buy them for the regular price of $60.69, plus tax.

Each rain-barrel system will include a white, 55-gallon barrel, a downspout diverter, an installation guide and a one-year warranty. To be eligible for the subsidized, discounted price people must prove they live in homes in one of the County's unincorporated areas by showing a driver's license, utility bill or home ownership record, and must fill out an application form and maintenance agreement. People can pay for the systems with cash, check or credit card.

Village Square is located on the corner of Main Avenue and Alvarado Street.

For more information, visit www.rethinkwateruse.org.

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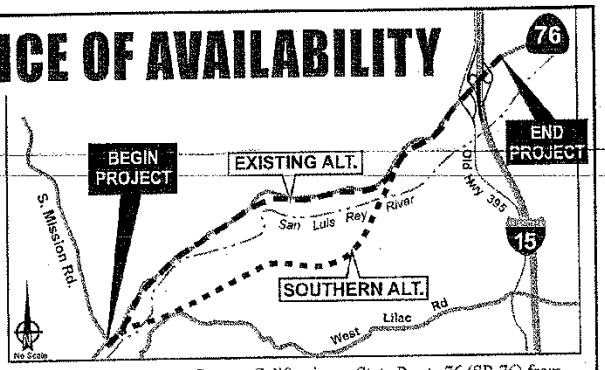
Showtimes good 9/17/10 thru 9/23/10
☆Devil (PG-13) Fri & Sat: 11:45 AM, 1:45, 3:45, 5:45, 7:45, 9:45 Sun: 11:45 AM, 1:45, 3:45, 5:45, 7:45 Mon - Thu: 3:45, 5:45, 7:45
✓Resident Evil: Afterlife 3D (R) Fri & Sat: 11:15 AM, 1:30, 3:45, 6:00, 8:15, 10:45 Sun: 11:15 AM, 1:30, 3:45, 6:00, 8:15 Mon - Thu: 3:45, 6:00, 8:15
✓Easy A (PG-13) Fri & Sat: 11:00 AM, 1:15, 3:30, 5:45, 8:00, 10:30 Sun: 11:00 AM, 1:15, 3:30, 5:45, 8:00 Mon - Thu: 3:30, 5:45, 8:00
☆The American (R) Fri & Sat: 12:30, 3:00, 5:30, 8:00, 10:30 Sun: 12:30, 3:00, 5:30, 8:00 Mon - Thu: 3:00, 5:30, 8:00
☆The Town (R) Fri & Sat: 11:15 AM, 2:00, 4:45, 7:30, 10:15 Sun: 11:15 AM, 2:00, 4:45, 7:30 Mon - Thu: 4:45, 7:30
☆The Other Guys (PG-13) Fri & Sat: 11:00 AM, 1:45, 4:30, 7:15, 10:00 Sun: 11:00 AM, 1:45, 4:30, 7:15 Mon - Thu: 4:30, 7:15
Barbie: A Fashion Fairytale (NR) Sat & Sun: (10:30 AM)
FREE LARGE SIZE POPCORN WITH A PURCHASE OF A MOVIE TICKET!
Redeem at concessions. One coupon per guest. No photocopies accepted. Cannot be combined with other coupons or discounts. PROMO CODE: M10-9-26 EXPIRES: 9-30-2010. Valid at River Village 6 and Mission Market Place only.

NOTICE OF AVAILABILITY

Caltrans

of the Draft Environmental Impact Report/ Environmental Impact Statement prepared for the State Route 76 South Mission Road to Interstate 15 Highway Improvement Project



The proposed project is located in northern San Diego County, California, on State Route 76 (SR 76) from South Mission Road to just east of the Interstate 15 (I 15) interchange including interchange improvements within the communities of Bonsall and Fallbrook. The proposed project covers a distance of approximately 5.2 miles. Within the proposed project limits, SR 76 is currently a conventional highway with two lanes, and signalized at-grade intersections. The proposed highway improvement project would widen SR-76 to four lanes, including construction of a second Park and Ride facility, widening the SR-76/I-15 separation by upgrading the interchange on and off-ramps with a design option of adding inner loops to create a partial cloverleaf configuration. In addition to the No Build Alternative, two build alternatives are proposed – they are the Existing Alignment Alternative and the Southern Alignment Alternative.

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA). A Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) to disclose potential impacts that may result from implementation of the proposed project.

Effective July 1, 2007, Caltrans assumed all the United States Department of Transportation Secretary's responsibilities under NEPA pursuant to Section 6005 of the Safe Accountable Flexible Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) codified at 23 U.S.C. 327(a)(2)(A). Caltrans is the lead federal agency for this undertaking.

The project has the potential for significant impacts, regardless of the mitigation proposed, to Growth, Land Use, Community Cohesion, and Visual Resources.

Impacts to Riparian and Wetland Communities, Wetlands and Other Waters of the United States and the State, and Species Afforded Protection under the Federal Endangered Species Act would not be significant after the incorporation of the recommended mitigation measures.

Project-level conformity analysis shows that the project will conform with the State Implementation Plan, including localized impact analysis for carbon monoxide (CO) required by 40 CFR 93.116 and 93.123. Comment is requested regarding the project-level conformity analysis.

The DEIR/EIS is available for public review and comment from **September 3, 2010 to November 2, 2010.** The DEIR/EIS, and all referenced technical reports, are available for review in hardcopy format at the following locations:

Caltrans District Office Branch - 4050 Taylor Street, San Diego CA 92110

San Diego County Library – Fallbrook - 113 South Main Avenue, Fallbrook CA 92028

City of Oceanside Library- Mission Branch - 3861 "B" Mission Avenue, Oceanside CA 92058

San Diego County Library – Vista Branch - 700 Eucalyptus Avenue, Vista CA 92084

The DEIR/EIS is also available for review on the Internet at the following link:
http://keepsandiegomoving.com/SR-76-Corridor/SR76-intro.aspx

A public meeting is scheduled for **September 23, 2010, from 5:00 pm to 8:00 pm, at the Bonsall Community Center** located at **31505 Old River Road** in Bonsall.

If you cannot attend, please submit your written comments to the following address by **November 2, 2010**: Ms. Debra Soifer, Acting Chief, Environmental Analysis Branch A, California Department of Transportation, District 11, 4050 Taylor Street, M.S. 242, San Diego CA 92110 **(619) 688-3106.**

Individuals who require special accommodation (American Sign Language interpreter, accessible seating, documentation in alternate formats, etc.) are requested to contact the Public Information Office at 619-688-6670 at least 21 days prior to the scheduled hearing date. TDD users may contact the California Relay Service TDD line at 1-800-735-2929 or Voice Line at 1-800-735-2922.

Figure 5.4-18
Notice of Availability Ad – English
(page 1 of 1)

ASIFICADOS

AVISOS LEGALES

ORDER TO SHOW CAUSE FOR
CHANGE OF NAME
SUPERIOR COURT OF CALIFORNIA
NORTH COUNTY DIVISION
325 S MELROSE DR • VISTA CA 92081-6643
CASE NO: 37-2010-00058481-CU-PT-NC
HEARING DATE: 09/28/2010. DEPT: 3. TIME: 8:30 AM ROOM: . PETITION OF (Name of each petitioner): SANDRA K WHITMORE ON BEHALF OF MINOR AZUL SKY ESQUERRA FLORES FOR CHANGE OF NAME(S) ORDER TO SHOW CAUSE FOR CHANGE OF NAME. TO ALL INTERESTED PERSONS: PETITIONER (NAME): SANDRA K WHITMORE FILED A PETITION WITH THIS COURT FOR A DECREE CHANGING NAMES AS FOLLOWS: PRESENT NAME: a. AZUL SKY ESQUERRA FLORES PROPOSED NAME: a. AZUL SKY FLORES WHITMORE. 2. THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why the petition for change of name should not be granted. NOTICE OF HEARING a. Date: 09-28-10, Time: 08:30 a.m., Dept.: 3, Room: ___ b. The address of the court is [X] same as noted above. 3. A copy of this Order to Show Cause shall be published at least once each week for four successive weeks prior to the date set for hearing on the petition in the following newspaper of general circulation, printed in this county (specify newspaper): Hispanos Unidos
DATE: AUG 23, 2010
AARON H KATZ, JUDGE
Judge of the Superior Court
Pub. AUG 27; SEPT 03; 10; 17; 2010
Published in Hispanos Unidos News Digital

FICTITIOUS BUSINESS NAME STATEMENT
File No. 2010-022784
FICTITIOUS BUSINESS NAME(S): a. LITTLE HELPER; b. WITH RUSSIAN TOUCH, LOCATED AT: 955 POSTAL WAY #50 • VISTA • CA • SAN DIEGO • 92083, MAILING ADDRESS: PO BOX 3416 • OCEANSIDE • CA • 92051. This business is conducted by: An INDIVIDUAL. THE FIRST DAY OF BUSINESS WAS OR IF NOT YET STARTED, CHECK HERE [X]. THIS BUSINESS IS HEREBY REGISTERED BY THE FOLLOWING: 1. TATYANA VOGEL • 955 POSTAL WAY #50 • VISTA • CA • 92083. SIGNATURE OF REGISTRANT: /s/ TATYANA VOGEL. THIS STATEMENT WAS FILED WITH RECORDER/COUNTY CLERK OF SAN DIEGO COUNTY ON AUG 20, 2010.
A new Fictitious Business Name Statement MUST BE FILED PRIOR TO: AUG 20, 2015.
Pub. AUG 27; SEPT 03; 10; 17; 2010
Posted in Hispanos Unidos News Digital

FICTITIOUS BUSINESS NAME STATEMENT
File No. 2010-022653
FICTITIOUS BUSINESS NAME(S): a. ALLIANCE FLORAL CO. LOCATED AT: 5600 AVENIDA ENCINAS #37 • CARLSBAD • CA • SAN DIEGO • 92008. MAILING ADDRESS: (OPTIONAL). This business is conducted by: A CORPORATION. THE FIRST DAY OF BUSINESS WAS 08/01/2009. THIS BUSINESS IS HEREBY REGISTERED BY THE FOLLOWING: 1. ALLIANCE FLORAL CO INC • 5600 AVENIDA ENCINAS #37 • CARLSBAD • CA • 92008 • CA. SIGNATURE OF REGISTRANT: /s/ RUDOLPH HERNANDEZ, CEO. THIS STATEMENT WAS FILED WITH RECORDER/COUNTY CLERK OF SAN DIEGO COUNTY ON AUG 19, 2010.
A new Fictitious Business Name Statement MUST BE FILED PRIOR TO: AUG 19, 2015.
Pub. AUG 27; SEPT 03; 10; 17; 2010
Posted in Hispanos Unidos News Digital

FICTITIOUS BUSINESS NAME STATEMENT
File No. 2010-021357
FICTITIOUS BUSINESS NAME(S): a. MIKEYS AUTHENTIC SPORT POST, LOCATED AT: 1707 E WASHINGTON AVE • ESCONDIDO • CA • SAN DIEGO • 92027. MAILING ADDRESS: (OPTIONAL). This business is conducted by: An INDIVIDUAL. THE FIRST DAY OF BUSINESS WAS OR IF NOT YET STARTED, CHECK HERE [X]. THIS BUSINESS IS HEREBY REGISTERED BY THE FOLLOWING: 1. MIGUEL ROCHA • 1707 E WASHINGTON AVE • ESCONDIDO • CA • 92027. SIGNATURE OF REGISTRANT: /s/ MIGUEL ROCHA. THIS STATEMENT WAS FILED WITH RECORDER/COUNTY CLERK OF SAN DIEGO COUNTY ON AUG 05, 2010.
A new Fictitious Business Name Statement MUST BE FILED PRIOR TO: AUG 05, 2015.
Pub. AUG 27; SEPT 03; 10; 17; 2010
Posted in Hispanos Unidos News Digital

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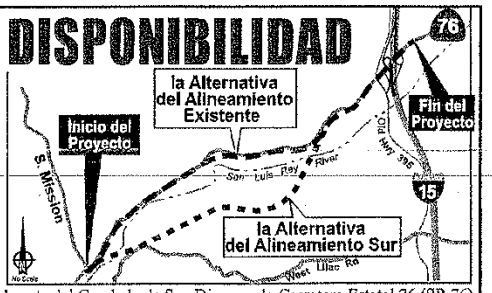
AVISO DE DISPONIBILIDAD

Caltrans

del Reporte Preliminar de Impacto Ambiental/Declaración de Impacto Ambiental preparado para el Proyecto de Mejoras a la Carretera Estatal 76 desde South Mission Road hasta el Proyecto de Mejoras de la Carretera Interestatal 15



El proyecto propuesto se encuentra ubicado en el norte del Condado de San Diego en la Carretera Estatal 76 (SR 76) desde South Mission Road, hasta el este del paso a desnivel (distribuidor vial) de la Carretera Interestatal 15 (I 15), incluyendo mejoras al paso a desnivel (distribuidor vial) en las comunidades de Bonsall y Fallbrook. El proyecto propuesto cubre una distancia de aproximadamente 8.37 kilómetros (5.2 millas). Dentro de los límites del proyecto propuesto, SR-76 es una carretera convencional de dos carriles e intersecciones semaforizadas a nivel. El proyecto propuesto de mejoras construiría la carretera SR-76 como una vialidad de cuatro carriles, incluyendo la construcción de un segundo estacionamiento (Park & Ride), la ampliación de la separación entre SR 76 y I 15 mediante la mejora de rampas de entrada y de salida con la opción de diseño de añadir gazas internas (loops) para crear una configuración semejante a una hoja de trébol parcial. Además de la Alternativa "No Construcción" (No Build), dos alternativas que implicarían construcción se han propuesto – la Alternativa del Alineamiento Existente y la Alternativa del Alineamiento Sur.

Este es un proyecto conjunto del Departamento de Transporte de California (Caltrans) y la Administración Federal de Carreteras (FHWA). Un Reporte Preliminar de Impacto Ambiental/Declaración de Impacto Ambiental (DEIR/EIS) ha sido preparado en cumplimiento con la Ley de Calidad Ambiental de California (CEQA) y la Ley de Política Ambiental Nacional (NEPA) para dar a conocer los impactos potenciales que pudieran resultar de la implementación del proyecto propuesto. A partir del 1 de Julio de 2007, Caltrans asumió todas las responsabilidades del Secretario del Departamento de Transporte de Estados Unidos bajo la ley NEPA en cumplimento con la Sección 6005 de la Ley Segura Responsable Flexible Eficiente de Equidad en el Transporte – Un Legado para los Usuarios (SAFETY – LU) compilada en el 23 U.S.C. 327(a)(2)(A). Caltrans es ahora la agencia que encabeza esta tarea.

El proyecto puede impactar significativamente, a pesar de la mitigación propuesta, el Crecimiento, el Uso de Suelo, la Unión Comunitaria, y los Recursos Visuales.

Impactos a Comunidades Ribereñas, de Humedales (tierras húmedas), y otros cuerpos de Agua de los Estados Unidos y del Estado, así como a Especies Protegidas bajo la Ley Federal de Especies en Peligro de Extinción no serían significativos una vez incorporadas las medidas de mitigación recomendadas.

El análisis de conformidad a nivel de proyecto muestra que la calidad del aire resultante será conforme al Plan de Implementación Estatal, incluyendo el análisis de impacto localizado de monóxido de carbono (CO) requerido por 40 CFR 93.116 y 93.123 de la Agencia de Protección Ambiental (EPA por sus siglas en inglés). Se solicitan comentarios respecto al análisis de conformidad a nivel de proyecto.

El DEIR/EIS está disponible para revisión pública y comentarios desde **el 3 de septiembre de 2010 hasta el 2 de noviembre de 2010**. El DEIR/EIS así como todos los reportes técnicos de referencia están disponibles para su revisión en formato de copia impresa en los siguientes lugares:

Oficina de Distrito de Caltrans - 4050 Taylor Street, San Diego CA 92110
Biblioteca del Condado de S.D. – Sucursal Fallbrook - 113 South Main Avenue, Fallbrook CA 92028
Biblioteca Pública de Oceanside – Sucursal Mission - 3861 "B" Mission Avenue, Oceanside CA 92058
Biblioteca del Condado de S.D. – Sucursal Vista - 700 Eucalyptus Avenue, Vista CA 92084

El DEIR/EIS también está disponible para su revisión en la siguiente página de Internet:
http://keepsandiegomoving.com/SR-76-Corridor/SR76-intro.aspx

Una reunion pública ha sido programada para **el 23 de septiembre de 2010, de 5:00 a 8:00 pm, en el Centro Comunitario de Bonsall (Bonsall Community Center)** ubicado en **31505 Old River Road en Bonsall.**
Si usted no puede asistir, por favor envíe sus comentarios por escrito, a más tardar **el 2 de noviembre de 2010**, a la siguiente dirección: Ms. Debra Soifer, Acting Chief,Environmental Analysis Branch A, California Department of Transportation, District 11, 4050 Taylor Street, M.S. 242, San Diego CA 92110 **(619) 688-3106.**

Personas que requieran acomodo especial (intérprete de Lenguaje Americano para Sordos, asientos accesibles, documentación en formatos alternos, etc.) se les pide que contacten a la Oficina de Información Pública de Caltrans llamando al (619) 688-6670 al menos 21 días antes de la fecha programada de la audiencia. Usuarios TDD pueden contactar a la línea TDD del California Relay Service llamando al 1-800-735-2929 o a la Línea de Voz llamando al 1-800-735-2922.

Caltrans

Carretera Estatal 76 Proyecto
http://keepsandiegomoving.com/SR-76-Corridor/SR76-intro.aspx

Figure 5.4-19
Notice of Availability Ad – Spanish
(page 1 of 1)

CHAPTER 6
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Bruce April, Deputy District Director, Environmental; Bachelor of Science Biology, San Diego State University; 22 years of Caltrans experience

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Joel Kloth, Engineering Geologist Environmental Engineering; Bachelor of Science Geology, California Lutheran University Thousand Oaks, California; 5 years experience in oil industry; 16 years of experience geotechnical and environmental consulting; 9 years of Caltrans experience

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CHAPTER 7
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CALABASAS, CA 91302

RANCHO MONSERATE HOA
4650 DULIN ROAD
FALLBROOK, CA 92028

KEVIN PFEIFER
4489 FALLSBRAE ROAD
FALLBROOK, CA 92028

RICH & MARY ROBLES
4057 FLOWERWOOD LANE
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4045 LIMBER PINE ROAD
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2388 VISTA VALLEY VERDE DRIVE
FALLBROOK, CA 92028

THOMAS EVANS
1311 BROOKE CREST LANE
FALLBROOK, CA 92028-4553

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3441 SARAH ANNE DRIVE
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PALM DESERT, CA 92260

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3337 ALTA VISTA DRIVE
FALLBROOK, CA 92028

PATRICIA STANLEY
4650 DULIN ROAD #147
FALLBROOK, CA 92028

FRANK KING
4650 DULIN ROAD #107
FALLBROOK, CA 92028

GREGORY LAURANCE
3103 CAMINITA CORTINA
FALBROOK, CA 92028

WINFIELD WOOD
3177 CAMINO PORTOFINO
FALLBROOK, CA 92028

HAROLD STANLEY
4650 DULIN ROAD #147
FALLBROOK, CA 92080

JANET WALKER
3679 LANCEWOOD WAY
FALLBROOK, CA 92028

BEN ALOE
4074 LINDA VISTA DRIVE
FALLBROOK, CA 92028

JUDITH L. SISEL
3028 SKYCREST DRIVE
FALLBROOK, CA 92028

JOE WALKER
3679 LANCEWOOD WAY
FALLBROOK, CA 92028

CHARLOTTE AND RIC MCGRAW
2667 DAISY LANE
FALLBROOK, CA 92028

GERRI ANKERMAN
3512 ALTA VISTA DRIVE
FALLBROOK, CA 92028

RONALD J SISEL
3028 SKYCREST DRIVE
FALLBROOK, CA 92028

PHILLIP JOHNSON
2911 NUESTRA LANE
FALLBROOK, CA 92028

BERNIE BURKE
38 SHADY HILL LANE
FALLBROOK, CA 92028

JUDY STERLING
3683 KATIE LENDRE DRIVE
FALLBROOK, CA 92028

DEAN WHITE
4650 DULIN ROAD #81
FALLBROOK, CA 92028

JIM SADLER
2132 VISTA VALLE VERDE
FALLBROOK, CA 92028

ROBERT S. HARRIS
3426 SARAH ANN DRIVE
FALLBROOK, CA 92028

FRANK AND KATHY SULAK
2506 DOS LOMAS
FALLBROOK, CA 92028

LISA MCCANN
2484 PALO VISTA ROAD
FALLBROOK, CA 92028

RICHARD AND KRISTEN CONAN
4650 DULIN ROAD #231
FALLBROOK, CA 92028

CATHY MUNROE
1991 TRACY COURT
FALLBROOK, CA 92028

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3121 OLD POST ROAD
FALLBROOK, CA 92028

MARILYN LAREZ
2080 HILLRISE ROAD
FALLBROOK, CA 92028

FRANK VILLALLI
2312 AQUA HILL ROAD
FALLBROOK, CA 92028

BRAD JORDAN
3121 OLD POST ROAD
FALLBROOK, CA 92028

ROBERT RING
1935 VISTA DEL NORTE
FALLBROOK, CA 92028

BOB BOYER
1309 HILLSIDE DRIVE
FALLBROOK, CA 92028

NANCY ZYBACH
2114 VISTA VALLE VERDE
FALLBROOK, CA 92028

KIP BOSSE
4268 LINDA VISTA DRIVE
FALLBROOOK, CA 92028

KAREN BOSSE
4268 LINDA VISTA DRIVE
FALLBROOOK, CA 92028

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4650 DULIN ROAD
FALLBROOK, CA 92028

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3646 KATIE LENDRE DRIVE
FALLBROOK, CA 92028

VALERIE ASHE
3724 EVERGREEN COURT
FALLBROOK, CA 92028

TOM NOONER
3663 KATIE LENDRE DRIVE
FALLBROOK, CA 92028

MARK BARONE
3632 KATIE LENDRE DRIVE
FALLBROOK, CA 92028

LINDA LAUREEN CARTER
3610 MONSERATE HILL COURT
FALLBROOK, CA 92028

FRANK HASNEY
3441 SARAH ANN DRIVE
FALLBROOK, CA 92028

ROSALIE MIKELSON
3020 ALTA VISTA DRIVE
FALLBROOK, CA 92028

CHARLOTTE GEREGHTY
3122 LARKWOOD COURT
FALLBROOK, CA 92028

WILLIAM GEREGHTY
3122 LARKWOOD COURT
FALLBROOK, CA 92028

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5773 BARBARY PLACE
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4572 LAKE SYCAMORE DRIVE
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3426 SARAH ANN DRIVE
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3309 VIA LOMA
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1174 SENWOOD WAY
FALLBROOK, CA 92028

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218 W. CLEMMENS LANE #48
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1762 ARBOLITA LANE
FALLBROOK, CA 92028

RICHARD RUTHERFORD
1925 KATIE COURT
FALLBROOK, CA 92028

JAMES PICKET
1997 KATIE COURT
FALLBROOK, CA 92028

BRENDA PICKET
1997 KATIE COURT
FALLBROOK, CA 92028

JUNE SHOUP
2791 LOS ALISOS DRIVE
FALLBROOK, CA 92028

LIN CRAFT
2791 LOS ALISOS DRIVE
FALLBROOK, CA 92028

RON ADRIAN
3255 ALTAVERDE DRIVE
FALLBROOK, CA 92028

JACK F. WOOD
3191 LOS VERDES DRIVE
FALLBROOK, CA 92028

CINDY STEWART
2038 VISTA VALLE VERDE DRIVE
FALLBROOK, CA 92028

JOE AND LINDA YATCHMAN
3129 CAMINO PORTOFINO
FALLBROOK, CA 92028

MARGE AND CHARLES MUHL
3518 SARAH ANN DRIVE
FALLBROOK, CA 92028

STEVE DILLENBECK
3102 CAMINITA CORTINA
FALLBROOK, CA 92028

GARY AND LAUREL FREEMAN
3235 INTEGRITY WAY
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2006 VISTA VALLE VERDE DRIVE
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ELIZABETH A. GROFIK
3203 ALTA VISTA DRIVE
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WM. E. AND TONI J. WOODCOCK
3189 CAMINITA CORTINA
FALLBROOK, CA 92028

SCOTT AND SANDI SIMPSON
3286 CAMINITA CORTINA
FALLBROOK, CA 92028

GRACE YELICH
4227 LOS PADRES DRIVE
FALLBROOK, CA 92029

JEAN CABIBI
2317 VISTA VALLE VERDE DRIVE
FALLBROOK, CA 92028

JOSH COBB
2346 VISTA VALLE VERDE DRIVE
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3713 CEDAR VALE WAY
FALLBROOK, CA 92028

MISHELL ROSE
2616 VIA ALICIA
FALLBROOK, CA 92028

BILLIE FOLI
4605 FIRE ROAD
FALLBROOK, CA 92028

BRUCE JENKIN
3991 WENDI COURT
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MR. AND MRS LOUIS WALSH III
3173 WESTMONT DRIVE
FALLBROOK, CA 92028

DAVID AND SHARON DANIELS
3045 VIA DEL CIELO
FALLBROOK, CA 92028

WILLIAM LEE
3162 CAMINO PORTOFINO
FALLBROOK, CA 92028

MR. AND MRS. MICHAEL J. JACKSON
3006 SKYCREST DRIVE
FALLBROOK, CA 92028

THOMAS J. TAUFER
11441 RANCHO HEIGHTS ROAD
PALA, CA 92059

MR. AND MRS. FRED RADACK
3059 GIRD ROAD
FALLBROOK, CA 92028

JACK AND ELLIE HENNESSEE
332 LEMONWOOD DRIVE
FALLBROOK, CA 92028

JUDITH N. ERICKSON
4202 LOS PADRES DRIVE
FALLBROOK, CA 92028

JOYCE BRAZEL
3847 ALTA VISTA DRIVE
FALLBROOK, CA 92028

DENNIS FLANAGAN
4444 FALLSBRAE ROAD
FALLBROOK, CA 92028

ROGER C. BRESLAU
4371 FALLSBRAE ROAD
FALLBROOK, CA 92028

WESTON F. MAUGHAN
3644 LANCEWOOD WAY
FALLBROOK, CA 92028

ROB HASS
1577 GREEN CANYON ROAD
FALLBROOK, CA 92028

ROBERT F. GONSETT
2685 ALTA VISTA DRIVE
FALLBROOK, CA 92028

KEVIN DICKSON
5820 W. LILAC ROAD
BONSALL, CA 92003

LINDA ANDREWS
3904 LIMBER PINE ROAD
FALLBROOK, CA 92028

JOYCE E. WOOD
3191 LOS VERDES DRIVE
FALLBROOK, CA 92028

HARRY CLYDE
2560 WILT ROAD
FALLBROOK, CA 92028

MARION SUMMERS
2098 VISTA VALLE VERDE
FALLBROOK, CA 92028

M. BEVERLY WARBURTON
901 CRESCENT BEND
FALLBROOK, CA 92028

CYNTHIA MEKETA
31278 AFTON FARMS LANE
BONSALL, CA 92003

SUE F. BURKE
1905 SANTA MARGARITA DRIVE
FALLBROOK, CA 92028

LUCY DICKSON
1211 VIA DE MARANATHA
FALLBROOK, CA 92028

MR. AND MRS. ERV LEMKE
1047 INVERLOCHY DRIVE
FALLBROOK, CA 92028

KENNETH P. DICKSON
1211 VIA DE MARANATHA
FALLBROOK, CA 92028

LINDA BECKETT
1704 MONSERATE WAY
FALLBROOK, CA 92028

JAMES BEEBY
4650 DULIN ROAD #175
FALLBROOK, CA 92028

VINICIA CARLSTROM
31380 LAKE VISTA TERRACE
BONSALL, CA 92003

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4650 DULIN ROAD, SPACE 20
FALLBROOK, CA 92028

ROBERT MITCHELL
3194 CAMINO PORTOFINO
FALLBROOK, CA 92028

MARION SUMMERS
2098 VISTA VALLE VERDE DRIVE
FALLBROOK, CA 92028

PETE AND JEANETTE PETTERSEN
4650 DULIN ROAD #212
FALLBROOK, CA 92028

RICHARD A. FOLLIS
3184 OLD POST ROAD
FALLBROOK, CA 92028

CAROLYN FOLLIS
3184 OLD POST ROAD
FALLBROOK, CA 92028

KRISTIE MCCORMICK
15556 SYCAMORE CANYON ROAD
POWAY, CA 92064

THOMAS AND MARJORIE GORDON
1741 SUNSET DRIVE
VISTA, CA 92081

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3701 MONSERATE HILL ROAD
FALLBROOK, CA 92028

ALLAN J. KUEBLER
260 LANDIS AVENUE
CHULA VISTA, CA 91910

KENNETH WESSON
3512 SARAH ANN DRIVE
FALLBROOK, CA 92028

DON BUNTS
3534 SARAH ANN DRIVE
FALLBROOK, CA 92028

JACK AND SHIRLEY LYPPS
4560 DULIN ROAD #71
FALLBROOK, CA 92028

BARBARA A. STERN
3810 CEDAR VALE WAY
FALLBROOK, CA 92028

LAURENCE MISCALL JR.
3634 GENISTA PLACE
FALLBROOK, CA 92028

JANET BRARD
4650 DULIN ROAD #54
FALLBROOK, CA 92028

VICTOR J. DERVIN
3974 FLOWERWOOD LANE
FALLBROOK, CA 92028

MARLENE DERVIN
3974 FLOWERWOOD LANE
FALLBROOK, CA 92028

CHRISTINE TAFT
2118 VISTA VALLE VERDE
FALLBROOK, CA 92028

CHARLES TAFT
2118 VISTA VALLE VERDE
FALLBROOK, CA 92028

BETTY ROGSTAD
2174 GREEN HILLS PLACE
FALLBROOK, CA 92028

ROBERT TAFT
2118 VISTA VALLE VERDE
FALLBROOK, CA 92028

JULIA TAFT
2118 VISTA VALLE VERDE
FALLBROOK, CA 92028

JAMES BURKE
4650 DULIN ROAD #48
FALLBROOK, CA 92028

CHARLES AND JANICE REYNOLDS
3611 LOGWOOD PLACE
FALLBROOK, CA 92028

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1061 RIDGE HEIGHTS DRIVE
FALLBROOK, CA 92028

ARNIE AND KAY WILLCUTS
4650 DULIN ROAD #108
FALLBROOK, CA 92028

NORMAN LERAAS
3939 FLOWERWOOD LANE
FALLBROOK, CA 92028

JIM MEYER
3876 FLOWERWOOD LANE
FALLBROOK, CA 92028

76 ACTION
5256 MISSION ROAD, SUITE 703
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4650 DULIN ROAD #12
FALLBROOK, CA 92028

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2557 GUN TREE LANE
FALLBROOK, CA 92028

JOANNE HOUDEN
RANCHO MONSERATE
HOMEOWNERS ASSOCIATION
4650 DULIN ROAD #55
FALLBROOK, CA 92028

BILL AND GAY ALMOND
2719 VIA DEL ROBLES
FALLBROOK, CA 92028

D. GEORGE MUZZUCO
4650 DULIN ROAD #139
FALLBROOK, CA 92028

ERZSEBET AND PAL PARIESY
4650 DULIN ROAD #98
FALLBROOK, CA 92028

JIM AND DONNA FARRINGTON
2402 EL CERISE
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DON AND MARY HALL
4650 DULIN ROAD #67
FALLBROOK, CA 92028

NANCY MCGOVERN
4650 DULIN ROAD #118
FALLBROOK, CA 92028

GERALD ROST
4650 DULIN ROAD #143
FALLBROOK, CA 92028

DAVID DESBIEN
3254 STAGHORN COURT
FALLBROOK, CA 92028

RALPH MCCARTHY
4650 DULIN ROAD #5
FALLBROOK, CA 92028

GARY AND SYRIL WHITLOCK
4650 DULIN ROAD #174
FALLBROOK, CA 92028

JAMES AND LINDA MORRISON
3649 FLOWERWOOD LANE
FALLBROOK, CA 92028

KENNETH G STERN
3810 CEDAR VALE WAY
FALLBROOK, CA 92028

MAXENE THOMPSON
4650 DULIN ROAD #110
FALLBROOK, CA 92028

JUDY DAVIS
4650 DULIN ROAD #95
FALLBROOK, CA 92028

CRAIG ROUSH
4650 DULIN ROAD #6
FALLBROOK, CA 92028

GLADYS WOOD
4650 DULIN ROAD #24
FALLBROOK, CA 92028

CHERYLE CLINITE
4650 DULIN ROAD #4
FALLBROOK, CA 92028

TED E. KRUGER
4650 DULIN ROAD #1
FALLBROOK, CA 92028

LYNN AND JUDY KNIERIM
4650 DULIN ROAD #39
FALLBROOK, CA 92028

GAIL KERRY
3120 VIA LOMA
FALLBROOK, CA 92028

MARGARET EHBERT
4650 DULIN ROAD #105
FALLBROOK, CA 92028

RICHARD AND MARION SAUNDERS
4650 DULIN ROAD #182
FALLBROOK, CA 92028

CYNTHIA MYERS
2788 RAINBOW GLEN ROAD
FALLBROOK, CA 92028

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CHAPTER 8
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